THE NEW-YORK
JOURNAL OF MEDICINE

FOR MAY 1852.

PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*Cases of maculated Typhus or Ship Fever; with suggestions of Treatment; being the result of a series of observations made during the prevalence of this disease at South Boston and Deer Island Hospitals, in* 1847–48. By J. B. UPHAM, M. D., of Boston. [With Illustrations.]

THE subject of this paper is one which has more or less engaged the attention of the writer for several years. The disease was first noticed while a student at the hospitals connected with the House of Industry, at South Boston, in the summer of 1846. During that season, not more than fifty or sixty cases appeared. As then manifested, the disease was strictly sporadic in its nature, and mostly of a mild character, though bearing all the distinctive marks so prominent in its subsequent epidemic form. It was a matter of curiosity, rather than of special interest or dread. Presently, it was remarked, that all the instances which occurred were among the emigrants recently landed from the ships; and hence it was commonly designated in the Hospital Register, by the title of "ship fever."

Towards the first of September the disease entirely disappeared from the wards, and was not again seen till the month of January following. In that and the first of the succeeding month, a few cases again appeared, and the admissions gradually increased in frequency till about the middle of March, when several vessels arriving in port together, after prolonged and tedious voyages, poured upon us a large influx of patients, and from this the epidemic may be said to date the commencement of its fearful reign. It continued till the first of July following, about which time the Quarantine establishment on Deer Island opened its portals; and no more admissions for the fever were allowed at the House of Industry. The greatest number of typhus cases in the wards at any one time, was about two hundred.

It was during these four months of labor in the capacity of assistant physician to the hospitals connected with the House of Industry, that my attention was turned to the study of this disease, in its primary form and its peculiar characteristics as revealed in the living and dead, minutely recorded. Subsequently, as resident physician for a few weeks in the Quarantine Hospital at Deer Island, my investigations were directed more particularly to the secondary effects of the fever, which here and at South Boston had been a constant accompaniment during the prevalence of the epidemic, and had proved, despite all the known methods of treatment, peculiarly intractable and fatal. It was while prosecuting my researches into this sequel to the fever, that the novel and striking lesions shown in the annexed plates were revealed, and which it is my belief had never before been regarded in this country or in Europe. My friend and colleague, Dr. C. A. Walker (afterwards assistant physician at Deer Island, and now superintendent of the Boston Lunatic Hospital), aided in the examination of many cases, and shared with me the fatiguing labors of the dead house.

As it is not possible in the limited space I should feel justified to occupy in the Journal, to give a memoir of the epidemic in question, which would be complete and distinct in all its parts; I propose here only to offer a few cases to represent the condition of the fever, as shown in its various types and modifications, together with some suggestions of treatment drawn from personal observation. It is my hope at some future day,

should opportunities present to extend still farther the field of investigation, to give in a more extended form the results of my researches in a disease which has more than decimated the ranks of our profession whenever it has assailed them. The delineations which follow will show in order:

I. The conditions and appearances of the fever as presented under the exalted and depressing type, in both its mild and severe forms, terminating in recovery and otherwise.

II. The secondary intestinal affection or sequel to the fever, with the striking lesions discovered in the intestinal tract.

III. The effects of treatment as adapted to these various forms and manifestations of the disease.

Some of the cases here selected, are the same published in an isolated form in the *Boston Medical and Surgical Journal*, in January and February, 1848, and are chosen as showing perhaps more perfectly than any others the different phases of the epidemic as it appeared in the above-named places. The first instance adduced is one of sporadic nature, of medium severity, which could be traced to no definite source, running its course evenly and without any marked phenomena, but of the nature of which there could be no doubt.

CASE 1.—Mary J. D., 30 years of age, of large frame, bilious and nervous temperament, was admitted to hospital of House of Industry, July 1st, with fever. Two or three weeks previously she was discharged from the wards, where she had remained several weeks under treatment for chronic bronchial affection, with indigestion and other dyspeptic symptoms. At the time of her departure she considered herself well, and returned to her situation as domestic in a family in the city.

Having experienced for two or three days previously erratic pains throughout the system, with occasional nausea, anorexia, dizziness and general lassitude; on the 26th of June, while about her usual employment, she was suddenly seized with chills, accompanied with violent headache, and followed by heat, pain in the back, joints and limbs, stiffness and general soreness of the muscles. The following day she took to her bed. Since then the above symptoms have been increasing from day to day, with decided exacerbations at night. She

has had hot skin, thirst, a loaded tongue, perverted vision, great restlessness and inability to sleep. She had been purged freely at the outset, and two days previous to admission got an emetic of ipecac., which operated well.

July 1st.—Appears a good deal prostrated. Complains of violent headache, particularly intense in a line across the forehead, and pains in back, loins and limbs; much nausea, retching; foul and loaded tongue. She has considerable cough, but this is of long standing. Abdomen soft and natural. No appetite, intense thirst, great restlessness and general uneasiness. Directed tepid sponging of arms and chest. Cold lotions to head; cool drinks; light farinaceous diet. Morphia, gr. $\frac{1}{8}$ nocte.

July 2d.—Drowsed a little, but got no refreshing sleep during the night. This morning has still intense pain across the forehead and in the eyes, with great sensibility to light—brows contracted—face sallow and expressive of some stupor—tongue swollen and flabby, covered with a thick, yellowish white fur extending to edges and tip—bad taste in mouth—fœtor of breath—harassing cough—pain and soreness of chest undiminished; percussion good anteriorly—slight bronchial mucous rale; burning heat in stomach; dull pain in upper portion of right iliac region, increased by coughing; abdomen otherwise natural; pulse 94, regular, quick and jerking, moderately full; urine scanty, high coloured, thick and sedimentous; three stools, very dark and fœtid; skin dry, but little above the ordinary temperature. Surface of abdomen, chest and shoulders presents, on careful examination, a *peculiar obscure mottled appearance*, resembling the commencing congestion of a mild case of roseola, but no maculæ yet defined. Cold drinks in small quantities, frequently administered; gruel; bland arrow-root given cold; evaporating lotion to head; turpentine stupe to chest and epigastrium; effervesc. mixt. p. r. n.; sulph. morph. gr. $\frac{1}{8}$ repeated in two hours, s. o. s.

July 3d.—Slept pretty well on $\frac{1}{8}$ gr. morphine; expression of face much the same; headache less severe; eyes a little injected; tongue has somewhat darker coat, otherwise the same; slight appearance of sordes on teeth and lips; great fœtor of breath; skin dry and hot, with great sensitiveness of

surface; pulse 104, regular, moderately full and firm; cough the same; tenderness of epigastrium slight; pain and uneasiness of chest relieved; abdomen soft, natural, no tenderness on pressure; no pain. Maculæ apparent on abdomen and sides of chest, seen also faintly on arms and legs; these spots disappear almost wholly on pressure, and resemble the lighter eruption of measles; urine scanty and high colored; no stool; surface of whole body emanates a strong, offensive, and peculiar odor; flying pains in back and limbs; intelligence good; no appetite; great thirst for cold drinks. Diets and drinks as yesterday; continue efferv. mixt.; ol. ricini. ʒss. in emulsion; morphia, p. r. n. at night; lot. to head continue.

July 4th.—Slept early in the night, after two doses morphia. General appearance as yesterday; pain continues in head, back and loins; eyes the same; face somewhat flushed; tongue inclining to brown; chest natural on percussion anteriorly; slight bronchial mucous rale; some dulness inferiorly, on back; respiration generally somewhat obscure; some tenderness at epigastrium; considerable nausea and retching. Abdomen soft, natural; no tympanites, tenderness, or pain; skin more hot, but moist; burning sensation at stomach; pulse as yesterday; spots more numerous and distinct, seen on abdomen, chest, extremities and back; urine as yesterday; three stools of dark yellowish brown color. The strong and peculiar odor of surface very noticeable; no appetite; great desire for cold drinks; intelligence a little obscured. Ice-water in small quantities and frequently; liq. acet. ammon. ʒss. q. t. horâ, or neutral mixture if the former disagrees; morphia at night, in doses one-sixteenth gr. repeated every hour till sleep supervenes, or till ¼ gr. has been taken.

July 5th.—Took ⅛ gr. morphia last night, which procured sleep of short continuance and disturbed; general appearance of more prostration; pain in head abated, continues in back and loins; eyes slightly injected; face less flushed; tongue swollen, coat darker in middle, very white towards edges, but quite moist; cough severe, attended with pain and hoarseness; considerable tenderness at epigastrium; nausea and retching relieved; heat of skin increased, communicating a burning sensation to the hand; general and great sensitiveness of sur-

face. Spots apparent on chest, abdomen and back, mostly vanish under firm pressure, more numerous and persistent on back; pulse 104, soft, compressible; breathing hurried and laborious, but regular; urine as yesterday; one stool; intelligence good; no appetite; persistent thirst; desires cold and acid drinks.

Mild farinaceous diet, given in small quantities at regular intervals; tepid sponging of trunk and arms; liq. acet. ammonia, or effervescing draught; cold drinks, slightly acidulated with cream of tartar. Morphia nocte, p. r. n.

July 6th.—Took ¼ gr. morphia; rested better during the night; still increasing prostration; pain more severe in head; in back and limbs as yesterday; eyes sensitive and suffused; face paler; tongue as yesterday; cough rather less; some tenderness of epigastrium; nausea returned; skin moist, but intensely hot (calor mordicans); spots much as yesterday, a little paler; pulse 104, a little fuller and firmer; breathing 36, somewhat laborious, interrupted by coughing; considerable apathy and stupor, but patient easily roused, and then answers questions readily and rationally; some sordes on teeth and lips; breath very fœtid; no appetite; urgent thirst continues; one yellowish-brown liquid stool; urine more abundant and of lighter color. Spirits mindereri or soda, p. r. n. Sponge with very mild solution of chloride of soda, tepid or cold, as most agreeable. Terebinthinate liniment to chest and epigastrium; in other respects ut heri.

July 7th.—Took ¼ gr. morphia, and slept well at night; face as yesterday; eyes less sensitive to light; tongue swollen; coat more foul and dark; sordes on teeth and lips; skin very hot but moist; coughs much; great tenderness in epigastric region; abdomen soft and natural; spots disappearing; pulse 100, of moderate strength and volume; respiration 32, laborious, accompanied with moaning; urine as yesterday; bowels rather loose; stools watery, dark, and offensive; no appetite; thirst continues urgent; complains of loss of memory and great weakness. Sinapism to epigastrium; pulv. Doveri, gr. viij., which repeat s. o. s. Continue in other respects as yesterday. Morphia in minute doses at night, s. o. s.

July 8th.—Slept well most of the night after gr. ¼ of mor-

phia; general appearance improved, though expressive of great weakness; eyes clearer and less sensitive to light; pain in head much less; tongue somewhat swollen, covered with foul, dark yellow coat in middle, very white towards edges, cleaning at tip; sordes on teeth; skin less hot and more moist; coughs much; soreness at epigastrium much relieved; abdomen soft and natural; bowels not so loose; one stool this morning, more natural; maculæ faintly seen; breathing 28, less laborious, with slight moaning; pulse 88, firmer; a little appetite; thirst not so urgent; complains of weakness and faintness. Repeat sinapism, s. o. s.; increase diet; beef-tea cautiously given; toast water; morphia nocte, gr. one-sixteenth repeated q. semi horâ till sleep ensues.

July 9th.—Took morphia three times and slept pretty well; general appearance much as yesterday; eyes the same; face more flushed; headache increased; tongue as yesterday; sordes on teeth and lips; cough severe; constant dull pain in chest; increased epigastric tenderness; breathing 32, regular, slightly laborious; abdomen soft and natural; skin moderately cool, moist; pulse 88, character as yesterday; urine the same; one stool, scanty and dark; diminished thirst and improved appetite. Effervescing draught; turpentine stupe to chest and epigastrium. Omit beef-tea, and allow only toast water, bland arrow-root or panada in small quantities and at frequent intervals.

July 10th.—Took ¼ gr. morphia and slept well; general appearance brighter; face paler than natural; eyes clearer; tongue has a dark yellow foul coat on centre and base, moist, very little sordes on lips; pulse 82; respiration 32; one stool, more natural; appetite improved. More nourishing diet; morph. nocte.

July 11th.—Slept much yesterday, but little during the night; tongue a little improved; sordes gone from lips, a little on teeth; very little pain in head, much in extremities; slight tenderness of epigastrium; abdomen natural; skin cool and moist; pulse 80, feeble, compressible; breathing 38, easy; urine natural; no stool; considerable thirst; appetite good. R. Vin. puri, sol. sulph. quiniæ, ā ā M. ℥ss. every fourth hour. Nourishing diet; toast water.

July 12th.—General aspect improved, but expressive of weakness; severe pain in legs, but none elsewhere; tongue cleaning, moist; cough loose, and much less; skin cool and moist; pulse 80, fuller and firmer; breathing good; no stool; but little thirst; appetite moderate. R. Ol. ricini, ʒ ss. in aromatic emulsion; wine and quinine continued; mutton broth in small quantities.

July 13th.—Slept well without the aid of morphia; eyes and face natural; tongue has thin, moist, dark brownish coat in middle, natural at tip and edges; no tenderness at epigastrium; thirst diminished; appetite improved; pain in lower extremities severe and annoying; skin cool and moist, natural; one stool; pulse 80, soft, regular, of moderate volume. More nourishing diet given often in small quantities; wine and quinine continued less frequently; stimulating pediluvia.

July 20th.—Nothing unusual has occurred since last date. Convalescence has proceeded evenly, and rapidly as could have been expected in a previously enfeebled constitution. Nourishing diet and drinks; beef-tea and broths cautiously given; bitter tonics alone or in combination with stimulants, and oil in emulsion to open the bowels when costive, has been prescribed, as circumstances required. Patient has now her usual degree of health.

This case offers nothing remarkable. Its duration from the first accession of fever to convalescence, was 16 days. As might have been predicted, the force of the disease was determined chiefly to the chest. Next to the lungs, the stomach suffered most. The prostration was very considerable. The brain was only slightly affected. There was no very marked vascular or nervous excitement. The eruption, the hot skin, the peculiar odor of the perspiration, and the general fuliginous aspect, were characteristic. The only plan of treatment demanded was the expectant, till marked prostration began to appear, when the combination of wine and quinine with a strengthening diet, cautiously managed, produced the best effects. Diarrhea, which came on once, was readily checked by the powders of ipecac. and opium in small doses.

CASE II.—John Swain, a sailor, 49 years of age, of robust frame and hardy constitution, formerly intemperate, became an inmate of the House of Industry in April. He assisted occasionally as nurse in the fever wards, and was constantly more or less in communication with the sick.

June 24th, was admitted to hospital. Four days previously he complained of weakness, lassitude and incapacity for exertion, with headache, pain in back and limbs, uneasy sensations at the stomach, general sensitiveness of surface and soreness of the muscles, or to use his own expression, "a *bruised* feeling, as though he had been beaten with clubs." For the three following days, these symptoms continued in an aggravated form, with occasional rigors and alternations of heat. His appetite remained pretty good, and he still kept about, wearing a dull look.

June 25th.—Sixth day of fever. Had at time of admission yesterday, intense cephalalgia, referred chiefly to forehead and eyes, with increase of all the preceding symptoms—well-marked and protracted chills, followed by intense heat. Got an emetic of ipecac. ʒss., which operated well, and produced diaphoresis, with temporary relief of symptoms. Slept but little during the night; has this morning intense pain in head and back; also pain in joints and limbs; eyes dull; face flushed, of darker hue than natural; expression of some apathy; tongue covered at centre and base with moderately thick, moist, yellow coat, clean and red at edges and tip; skin moist, not much above the natural temperature; abdomen soft and natural; slight gurgling in right iliac region, no pain on pressure; respiration good; an abundant eruption beginning to appear on abdomen, shoulders and chest, like florid measles in form and hue, some slightly raised, others not at all, vanishing mostly under pressure; great restlessness; considerable appetite; much thirst; pulse 84, full and moderately strong; urine free; one or two stools since yesterday morning, offensive. Ol. ricini in emulsion; light farinaceous diet; acet. ammonia, ʒss. q 4th horâ—morphia, gr. ¼, nocte.

7th day.—Slept two hours after the morphia. On waking felt much relieved; this morning expression better; intellect clear; less pain in head and back; same in joints; tongue as

yesterday; face of darker hue; pulse more frequent, of moderate force and volume, regular; breathing a little quicker, regular; skin hot and dry; abdomen natural; no tympanites, tenderness, or soreness; gurgling ceased; spots more apparent, of darker hue, irregular in form, isolated and in clusters, disappear only partially under the finger, and communicate, some of them, a slight sensation of elevation; urine as yesterday; bowels regular; appetite continues good; thirst urgent, desires acid drinks; complains of much weakness. Gruel, weak tea and dry toast in moderate quantity; slightly acidulated drinks; tepid sponging; acet. ammon. ut heri.

8th.—Increased prostration; no good sleep; wandering delirium at night; some nervous agitation; intense pain in head; tongue thickly coated with dark yellow fur, but yet moist, tip and edges of lilac hue; dark thin line of sordes on lips; some cough; pulse more frequent, otherwise as yesterday; skin very hot; perspiration at times abundant, but affords no relief; maculæ very abundant on abdomen, chest and extremities, darker in hue, on some parts resemble the dark efflorescence of measles, slightly raised, disappearing on firm pressure; others of the nature of true petechiæ, imbedded in substance of skin, persistent; some tenderness at epigastrium; no tympanites or tenderness of abdomen; much nausea and retching; urine high colored; bowels moderately free; dejections liquid and dark; appetite still good; much thirst for acid drinks. Diet and drinks as yesterday; tepid sponging continued; cold to head; efferv. mixt., sulph. morph., gr. $\frac{1}{8}$ at night, repeated in two hours, s. o. s.

9th.—Got some sleep after two doses morphia; pain in head diminished; eyes somewhat injected; face more flushed, inclining to leaden hue; tongue darker in middle and base, in other respects as yesterday; pulse weaker, compressible; some irregularity of breathing; slight cough, attended with some pain; percussion good anteriorly; slight bronchial mucous rale; skin less hot; perspires much; spots increasing in abundance; still darker, communicate no sensation of elevation to the finger; persistent under pressure; abdomen natural; three dejections; appetite morbid; some stupor, but intelligence good when roused; same treatment continued.

10*th.*—Slept considerable; stupor more marked, but intelligence clear when roused; answers questions with difficulty from exhaustion; some sordes on teeth and lips; tongue swollen, with dry brownish coat in centre, light moist fur at edges; pulse more frequent and feeble, very compressible; skin cool and moist; perspires continually; spots petechial, livid, persistent; abdomen natural; three or four dejections. Beef-tea in small quantities regularly given; ʒss. of a mixture of wine and sol. sulph. quiniæ, equal parts every fourth hour; sulph. morph. gr. $\frac{1}{16}$ repeated twice at intervals of an hour.

11*th.*—Slept very little; eyes suffused; dull pain in head; face of dusky hue; thick dark brown, foul coat on tongue, livid at tip and edges; sordes on teeth and lips; breathing short, hurried; pulse 112, weak, compressible, regular; skin moist, slight increase of temperature; considerable cough; percussion dull at posterior and inferior portions of chest; some tenderness at epigastrium; abdomen soft and natural; abundant livid maculæ on abdomen, chest and back, less distinct on arms and legs; urine high colored, cloudy; two stools; great prostration; stupor, but no decided cerebral symptoms; impulse of heart feeble; appetite *gone.* Vin. et quin. every two hours; mutton broth in small quantities frequently given; morphia at night in minute doses, p. r. n.

12*th.*—Slept well towards morning; $\frac{1}{8}$ gr. of morphia; dull headache continues; tongue a little drier and browner; face as yesterday; sordes on teeth and lips; breathing 36; pulse 112 regular, much less compressible; skin above natural temperature, less moist; chest symptoms as yesterday; spots more apparent on extremities, in other respects as yesterday; abdomen natural; two stools, yellowish, liquid, fœtid; stupor rather less marked; appetite returned; intense thirst. R. efferv. draught; porter in small quantities; vin. et quin., ut heri. Morphia, p. r. n.

13*th.*—Slept pretty well; expression of countenance dull and vacant; more stupor; eyes less injected, some sensitiveness to light; tongue protruded with difficulty, red at tip and edges, more dry, covered with a thick dark yellowish brown coat, fissured; no tenderness at epigastrium; percussion decidedly dull to a considerable extent on lower back, with

slight sub-crepitant rale and bronchophony; breathing as yesterday; skin more hot; pulse 112, as yesterday; abdomen natural; one stool, dark, slimy, fœtid; petechiæ still of darker hue, more vivid on extremities, very abundant and strongly marked on back; some appetite, and thirst for acid drinks; great prostration; same treatment as yesterday. Morphia at night, p. r. n.; tonic mixture more frequently given.

14*th.*—Got some unquiet and disturbed sleep; continual moaning; more complete prostration; great headache, and pain in every part of body; great sensibility of surface, and soreness of muscles; face more flushed and of more dusky hue; tongue glossy at tip and edges; its central coat dry, hard and black; protruded with difficulty; no sordes on teeth; slight cough; tenderness at epigastrium; pulse 98, rather more feeble; skin as yesterday; breathing more difficult, short and hurried; spots fainter; three stools, character as yesterday; appetite capricious; constant and great thirst for acid drinks; intelligence more obscure; tendency to coma; subsultus affecting tendons of wrists and hands; decubitus dorsal, with knees drawn up; slips down in bed. Beef-tea; chicken broth; wine and quinine, ℥ ss., g. sec. horâ. Efferves. draught; Dover's powder, grs. v. nocte.

15*th.*—Slept pretty well; general appearance as yesterday; pain continues severe in head and back; eyes injected, and very sensitive to light; tongue protruded with difficulty, withdrawn slowly, with a hard, dry dark coat extending to tip, edges livid and moist; more sordes on lips; face more dull, more livid and dusky; chest symptoms less severe; continued tenderness at epigastrium; sensitiveness of surface continues; skin generally, over the body, darker than natural; spots fading, the lightest disappear on pressure, others do not; very light tenderness of abdomen; one stool; urine abundant; skin less dry and hot; pulse 88, of moderate fulness and firmness, regular; intelligence improved; some moaning; appetite and thirst less; decubitus more easy. Arrow-root, beef-tea, cautiously given; demulcent drinks; tonic mixture every fourth hour; morphine, gr $\frac{1}{16}$, at night; repeat every hour till sleep ensues, or till gr. $\frac{1}{4}$ is taken.

16*th.*—Passed a better night; general appearance of great

prostration; countenance clearer; eyes less injected and less sensitive; pain in head and back much less; tongue protruded and withdrawn more readily, clearing at tip and edges a little, otherwise as yesterday; less sordes; less cough, breathing more easy and free; slight moaning; very slight tenderness at epigastrium and abdomen; surface less sensitive; spots fainter; skin natural; urine natural; three stools, scanty, yellow; thirst yet urgent; appetite strong; intelligence good; decubitus easy and natural; says he feels weaker. Efferves. draught; veal broth; arrow-root; wine and quinine, ut heri; morphia, s. o. s.

17*th.*—Slept very well; complains of weakness only; eyes and face more natural; tongue inclining to moist, its coat less hard; breathing 16, regular, free, easy; cough less; skin cool, natural; sensitiveness of surface diminished; spots fading; no tenderness at epigastrium; urine more abundant, passed without difficulty; two stools, more natural; appetite good; thirst still considerable for acid drink; intelligence good; decubitus on side or back, easy; pulse 80, full, firm, regular. Continue same remedial measures.

19*th.*—The notes of yesterday showed an improvement in all the symptoms; tongue cleaner at tip and edges, its coat less dark and hard; all the excretory functions more naturally performed; pulse 78, full and firm.

This morning, appears still improved; slept well all night; no pain; face and eyes brighter; tongue cleaning; no cough; skin natural; urine abundant, of good color; one stool, natural; appetite urgent; thirst less; pulse 72, full, regular. Same treatment; particular caution enjoined as to diet; good farinaceous articles; calves'-foot jelly and the lighter broths, administered in small quantities, frequently and regularly; tonic mixture, ℥ ss. ter in die; morphine, ⅛ gr. nocte, s. o. s.

21*st.*—Yesterday had somewhat more thirst; tongue clean in middle, but dry and very red, a broad line of white coat on each side; no pain; expressed himself as feeling every way better. Substitute a grain or two of sulphate of quinine, three times a day for the mixture.

To day, tongue cleaner, but rather dry and very red; no morbid thirst; universal and marked improvement; complains of nothing but weakness and hunger.

24th.—Nothing unusual has occurred; tongue moist, still very red; no affection of chest remaining; thirst natural; digestion well performed; all functions natural. Convalesence was speedily merged in perfect health, with no untoward symptom.

Observations.—Here the disease was more intense than in the preceding case, and showed a pretty distinct crisis on the eve of the 15th day. The persistent appetite was a curious feature. The petechial eruption and dusky surface were strongly exhibited, but the peculiar heat alluded to above was not present, and the offensive odor of the body, though noticeable, was slight. There was considerable stupor, but cerebral and general nervous disturbance was not marked; there was no prominent affection of any internal organ. The tendency was to general exhaustion, and the case, though of medium severity, is a fair example of a large class, which assumed the depressing type during the epidemic, and shows well the effect of this form of the fever upon a robust and muscular subject. The benefit of a cautious stimulant and tonic treatment, which was adopted in such cases, and followed up even from an early period in the disease, is manifest.

The readiness with which, in both of the above cases, sleep was induced by minute doses of morphia, also demands notice.

CASE III.—George Ames, 48 years of age, of strong frame and plethoric habit, formerly addicted to intemperance, has been for several years an occupant in the House of Industry. For two or three years past he has officiated as nurse in the various wards connected with the hospital. His general health is good; he has a resolute will, and strong powers of endurance. Since the 1st of May, he has had charge of one of the principal fever wards of the hospital.

On Sunday, June 20th, experienced feelings of languor and uneasiness; general soreness of muscles; loss of appetite; dull pain in head, back, and joints, with considerable prostration of strength. The following day these symptoms increased in severity, but he made no complaint, and kept about, attending to his usual duties in the ward. On the 22d, at the hour

of visit, his condition attracted observation, and he was directed to keep his bed. He had taken that morning, on his own responsibility, two ounces of a mixture containing equal parts of tincture of rhubarb and castor oil, which had the effect of producing several abundant dark-yellowish fæcal discharges; his tongue was slightly coated—pulse good. He still persisted in attempting his customary occupations. Towards evening he had an aggravation of all the preceding symptoms, with nausea, retching, and occasional chills, followed by intense heat.

On the 23d, symptoms still continued. He had intense cephalalgia, a dull and inexpressive face, suffused eyes, full and laboring pulse. Directed an emetic ipecac., ʒ ss. liq. acet. ammon., light farinaceous diet.

The day following there was increasing prostration; constant and harassing pain in head, back, and limbs; hot skin, thirst, restlessness, considerable nausea and uneasiness in the stomach. Towards evening, on the 25th, the headache and pain in the back sensibly abated; there was dizziness, increasing apathy, and some confusion of the intellect. He had been sponged, and had taken mild diaphoretics, cool and acidulated drinks, and Dover's powder or morphia in minute doses at night.

26*th.*—Sixth day of fever. Complains of great weakness; expression of much apathy; eyes suffused; cheeks flushed; tongue covered posteriorly with thick yellowish coat, clean at sides, and tip moist; fœtor of breath; breathing somewhat irregular; some nausea; skin rather dry, not much above standard temperature; abdomen full and soft; no appetite; much thirst for acid drinks; pulse a little more frequent than natural, of moderate strength, and volume regular. One dejection this morning, dark, liquid, and offensive; mind dull, but patient is easily roused, and then answers questions readily. Efferves. mixt., weak lemonade, gruel, morphia, $\frac{1}{8}$ gr. nocte.

27*th.*—Seventh day. Slept but little; complains of no pain; increased prostration; countenance dull; eyes much suffused, conjunctiva slightly injected, some dimness of vision; tongue has dark yellow coat on centre and base, red at edges and tip; breathing more frequent; skin intensely hot, but

moist; hue of surface a little darker than natural; sides of abdomen and chest present an indistinct mottled appearance (the faint roseate congestion before alluded to), by attention to which the approach of the characteristic eruption may be predicted with certainty; the same appearance, more obscurely seen, on the shoulders and thighs; abdomen soft and natural; urine free, and high colored; three dejections, dark, slimy, fœtid; pulse 90, moderately full, soft, compressible. Directed cold or tepid sponging, as most agreeable; neutral mixture; spts. mindereri, ʒ ss. q. 4th horâ; sulph. morph., gr. $\frac{1}{6}$, nocte.

8th day.—Slept but little during the night; general appearance of prostration; decubitus mostly on back; lies low in bed; eyes as yesterday; face flushed and dull; tongue more coated, inclining to brown; pulse a little more frequent, more compressible; some cough, attended with soreness; skin rather dry, heat as yesterday; spots begin to appear on abdomen and chest, of florid hue, vanish under the finger; urine scanty, and very dark; one dejection, dark and slimy. On grasping the patient's wrist, he invariably withdraws his hand, and glides it slowly, and to appearance unintentionally, upward as far as the neck; answers questions with difficulty and hesitation. Sponge trunk and arms with tepid water; mucilaginous drinks; in other respects, continue treatment as yesterday.

9th.—Passed an unquiet and restless night; general appearance as yesterday; much apathy and stupor; conjunctiva much reddened and injected; cheeks assume a dusky hue; tongue uniformly covered with a foul, yellowish brown coat; respiration hurried; skin rather dry, less hot, emits a strong offensive odor; pulse laboring, compressible; eruption appearing thickly on abdomen and chest, in the form of dusky red, irregular maculæ, isolated and in clusters, varying in size from one quarter of a line to a line and a half, or two lines in diameter; these spots seem mostly buried in the substance of the skin, and vanish under firm pressure; intermingled are a few measle-like eruptions of florid hue, which give a sensation of elevation as the finger is passed lightly over them; the spots also appear, though less vividly, on the shoulders, loins, and thighs; abdomen natural; urine high colored and

clear—three stools; bland, farinaceous diet given regularly in small quantities; tepid sponging of arms and trunk—li q. acet. ammon. R. Vin. puri, sol. sulph. quinæ āā ʒss. every 4th hour; morphia in minute doses at night.

10*th.*—Took gr. $\frac{1}{8}$ morphia; slept considerably after midnight; increased prostration; decubitus mostly dorsal; tendency to slip down in bed; delirious at intervals, manifested by low muttering; no pain complained of; face of leaden hue, dull and stupid; eyes as yesterday; tongue has a dark brown stripe in middle, flanked by moist yellow fur; red at edges and tip—protruded with difficulty, breathing irregular, quicker—some cough; chest natural on percussion in front, decidedly dull over whole back, more manifest inferiorly; but little heat or dryness of surface—general sensitiveness; slight tenderness at epigastrium; abdomen full and soft—free from tympanites, tenderness, or pain; spots more developed—more numerous—seen on abdomen, chest, extremities, and back; pulse 100, of moderate volume, less compressible; urine as yesterday; two stools—character as yesterday; some subsultus among tendons of wrists and fingers. Blisters to nape of neck, and sinapisms to calves of legs; porter in small quantities. In other respects same treatment as yesterday.

11*th.*—10 A. M. Has slept constantly since midnight, having taken previously from $\frac{1}{8}$ to $\frac{1}{4}$ gr. morphia in divided doses; increased prostration; decubitus as yesterday; no pain complained of; constant incoherent moaning; no decided delirium; countenance as yesterday; eyes much suffused and injected; tongue protruded with difficulty—covered uniformly with a thick dark-yellowish coat, red on edges; no sordes on teeth or lips; breathing 40, short and laborious; cough less; percussion dull on back, somewhat so on sides inferiorly; slight tenderness at epigastrium; abdomen soft; no pain or tenderness on pressure; general surface of body sensitive, of darker hue than natural; spots more distinct, larger, darker in hue, more apparent on extremities; urine very high-colored, and passed involuntarily, as are also the stools which are more liquid and lighter; no appetite; much thirst; pulse 104, very weak, small, compressible, regular; subsultus rather more marked than yesterday—confined to tendons of extremi-

ties; stupor great, but not amounting to coma; comprehends questions when roused, but answers with hesitation. Sinapisms to epigastrium, inside of thighs and feet; discontinue the porter; pure wine and beef-tea; omit morphia at night.

12*th*.—No sleep last night; moaned constantly; much restlessness and jactitation. This morning there is a general appearance of increased prostration; patient sinks down in bed; increased stupor; can still be roused to answer intelligently when repeatedly spoken to; has no pain; face still more dusky; capillary circulation feeble; eyes as yesterday; tongue the same; breathing 42, short, irregular, and laborious; some cough; very slight dulness on percussion observed anteriorly and inferiorly—on sides and back rather more marked; bronchial mucous rales; abdomen natural; spots more petechial; urine and fæces passed involuntarily; no appetite; thirst less urgent; pulse 110, very feeble, and compressible—somewhat irregular—same treatment; wine more often; morphia nocte $\frac{1}{16}$ gr., repeated in an hour, s. o. s. 8 P. M. Countenance more expressive of stupor and prostration; decubitus on side; breathing short and laborious; saliva dribbles from the mouth; pulse rapid and feeble.

13*th*.—Took $\frac{1}{8}$ gr. morphia; slept a little during the night; decubitus dorsal; slips down in bed; face of livid hue; eyes greatly injected; tongue protruded with difficulty, and slowly withdrawn—its coat darker and harder—some cough—epigastric tenderness; abdomen soft and full. No tenderness or pain; skin very hot, rather dry; breathing more laborious—hurried; pulse 112, very feeble and compressible—irregular and intermittent; no appetite; intense thirst; spots livid; urine and stools passed involuntarily; subsultus as yesterday; decided coma; intelligence much confused—answers incoherently. R. Vin. puri ʒss.; sulph. quinæ, gr. j; iodid. potass., gr. ij. M. Take every two hours. Beef-tea—toast water—liq. acet. ammon. p. r. n.

14*th*.—Took $\frac{1}{8}$ gr. morphia at 8 last night; slept for an hour or two soon after; prostration very great; decubitus constantly dorsal; stupor increased—the patient can still be roused to intelligence; face of a dull ashen hue; eyes continue injected; tongue protruded with difficulty, and not with-

drawn till requested, its coat more foul, browner; respiration laborious; sighing; cough less—apparently from inability; moans constantly; skin cooler; abdomen natural; spots livid, coalescing; intense thirst; slight subsultus; pulse 128, soft, compressible, feeble, regular; stools and urine voluntary; continue treatment of yesterday—flying blisters.

15*th*.—12 o'clock. Took $\frac{1}{6}$ gr. morphia at 8 last evening, which was repeated at 10; slept from midnight till 7 A. M. Nurse reports patient to have passed a more quiet and better night than heretofore; this morning expressed himself as feeling much better, and asked to sit up. On being raised by his attendant he fainted; has since made several efforts to speak, but failed to make himself understood; general appearance of extreme prostration; decubitus constantly dorsal; stupor great, but is more easily roused than yesterday; articulates very indistinctly; face of more ashen hue; eyes more injected, and darker; tongue protruded with less difficulty, very tremulous, returned more readily, its coat more dark and foul, livid at tip and edges; breathing more laborious, interrupted, irregular; but little cough; abdomen natural; skin fuliginous; spots disappearing; no thirst; slight subsultus around the mouth; less coma than yesterday; pulse 140, weak, very compressible, more regular. Continue the mixture every second hour; warmth to feet; flying blisters; efferves. mix. and beef-tea. p. r. n.

16*th*.—Since 2 o'clock A. M. has drowsed a little; general appearance worse; patient understands readily, but is unable to articulate; eyes more injected; tongue protruded with difficulty, very tremulous, swollen, fissured, covered with a hard, dry, yellowish-brown coat, livid at edges and tip; coughs very little; mucous rale distinct over whole chest anteriorly; breathing 50, short, laborious, interrupted; skin moderately hot, dusky; abdomen natural; subsultus continues; urine high-colored; stools dark, liquid, very offensive, passed involuntarily; strong and peculiar odor emanates from whole body; pulse 136, feeble, tremulous, rather less compressible. Continue treatment; stimulants more frequently, brandy, sinapisms to epigastrium and inside of arms and thighs.

17*th*.—Took $\frac{3}{4}$ grain of morphia; got three or four hours

of distnrbed sleep during the night; general appearance much as yesterday; tongue more dry and hard, tremulous, swollen; breathing 50, character as yesterday; abdomen full and soft, no tympanites, pain or tenderness; skin moderately hot, emits a strong offensive odor; spots fainter; subsultus increased; pulse 128, feeble and tremulous; urine scanty, very high-colored, offensive; asked for vessel this morning; stools scanty, dark-yellow, very fœtid; decubitus on back; lies low in bed; stupor still increased, but no marked delirium; patient can be roused with great difficulty, and immediately relapses. Continue active stimulant and revulsive medicines.

July 8th, 18th day, 11 A. M.—In articulo mortis; last evening at 8, signified a wish to be raised up; had at that time a very dark, liquid, offensive stool; has been unable to articulate or to swallow since midnight; insensible to external impressions. Died at 2 P. M.

Autopsy 20 hours after death.—Subject well developed; very muscular; no emaciation; moderate rigidity; considerable discoloration of posterior portions of the body, the skin of those parts presenting a livid hue; a few petechiæ observed the same as before death; chest full and capacious; abdomen soft; no unusual distension.

Head.—Dura mater has on its external surface a considerable amount of dark blood collected in the form of irregular globules; the membrane itself natural. Arachnoid transparent, its cavity contains an ounce of liquid serum, appearing, as seen through the membrane, like jelly in the channels on the surface beneath; veins of pia mater moderately filled with dark blood; no adhesion of the membranes to the surface; cortical substance of the brain firm, of a pale ash color, its medullary portion also normal in color and consistence; numerous points of black blood exude from its cut surface; lateral ventricles contain each about a drachm and a half of pure serum; venous congestion remarkably shown on lower aspect of cerebellum; fluid in sub-arachnoidian space very abundant, distending the membrane at base of brain and commencement of spinal cord.

Neck.—Lining membrane of trachea somewhat reddened; in other respects nothing worthy of remark.

Thorax.—No adhesions of lungs to ribs. Cavity of pleura contains only its usual amount of serum. Pulmonary tissue mostly firm and crepitating on percussion; the lower and posterior portions of both lungs condensed and somewhat engorged, nearly impermeable to air. At apex of right lung is found an old cicatrix, and around a few chalky concretions, the lower and posterior margin of the same lung splenetized; bronchia engorged with reddish mucus. Pericardium normal, contains its usual amount of serum. Heart slightly enlarged, its parietes flabby and soft, no marked injection of internal lining membrane—valves normal—soft greenish coagula of lymph found on right cavities—left ventricle contains a small quantity of blood—the blood in aorta dark, thin and oily.

Abdomen.—A layer of fat three-fourths of an inch in thickness under the skin. Liver of natural size, very pale externally, its texture not disorganized; vessels filled with black, dissolved blood. Gall-bladder full but not distended. Spleen natural in size, bluish-black color, its texture somewhat softened, filled with black fluid blood. Kidneys normal. Omentum loaded with fat. Stomach of moderate size; mucous membrane in its cardiac half paler than usual, presents a pinkish tinge at pyloric extremity; the membrane seems somewhat softened around cardiac orifice, yielding strips of only a line or two in length; in other respects presents nothing remarkable. Mesenteric glands small and firm.

Intestines.—Externally some slight discoloration at lower portions of ilium; along the line of attachment of the mesentery veins are manifest, moderately congested with dark blood; internally mucous membrane of small intestines natural throughout its whole extent. About eight inches from ileo-cœcal valve is a spot two and a half inches in length by an inch in breadth, of uniform congestion, an ecchymosis, apparently, of the sub-mucous cellular tissue; internal surface otherwise natural; follicles of Brunner and solitary glands not developed; Peyer's patches normal, seen with difficulty; colon contains a moderate quantity of fæcal matter, its mucous lining normal. Bladder normal.

CASE IV.—John Salter, age 45, a strong, muscular man,

was brought from ship Washington, in quarantine, to Deer Island Hospital, in an advanced stage of the fever.

Sunday, Dec. 26th.—He presented the following symptoms: extreme prostration and collapse, with cerebral and general nervous disturbance; coma; low, muttering delirium; irregular and hurried breathing; universal subsultus; violent contractions of flexor muscles of extremities; inability to speak; tongue protruded with great difficulty, swollen, hard, dry and cracked; teeth loaded with black sordes; pulse 150 and scarcely perceptible. His abdomen was soft and natural to the feel; stools and urine passed under him; the surface of his body emanated an unusually offensive odor, and was covered universally, with the exception of the hands, feet, and face, with petechiæ, irregular in form, of large size and livid hue. Directed warmth to extremities. Sinapisms to epigastrium and inside of arms and legs, blister to nape of neck, wine and brandy freely given.

27th.—No material change. Extremities cold; risus sardonicus. Flannels wrung in hot water to be applied to extremities and head. Flying blisters. Stimulants pushed.

He died the following morning.

Autopsy.—Externally, no emaciation; chest large and full; abdomen soft, natural; no petechiæ. Adeps abundant over chest and abdomen.

Head.—Vessels of dura mater filled with dark blood. Arachnoid natural, a considerable amount of serum effused into its cavity, most apparent at points corresponding with parietal protuberances, where it appears like thin, transparent jelly. Pia mater considerably congested. Veins distinct between convolutions of cerebrum. On removing the membrane whole surface beneath appears somewhat reddened, more at base of anterior and middle lobes. Cortical substance normal in consistence and color. Medullary of slight violet hue, firm and natural; when cut numerous small points of dark blood are seen. Lateral ventricles each contain about a drachm of serum. Veins on floor of ventricles beautifully distinct. Cerebellum normal. Base of brain and commencement of spinal cord shows nothing remarkable.

Thorax.—Right lung shows old adhesions to the ribs

throughout its whole extent, a few traces of tubercles at its apex, its middle and lower lobes much engorged, particularly at posterior portions; inferior third of lower lobe friable, resembling in appearance a softened spleen. Left lung congested in its depending parts, otherwise normal. Bronchial tubes obstructed with frothy mucus. Pericardium natural. Heart large and flabby, its walls a little softened, contains in its cavities a medium quantity of greenish-yellow coagulum. Valves normal. Blood in aorta and large vessels fluid, dark and sizy, its clot soft, readily broken down. The internal lining of both arteries and veins exhibits a peculiar oily appearance.

Abdomen.—Liver of natural color and size, its structure normal. Gall-bladder distended with a dark tarry fluid. Spleen natural in size, its texture easily broken down by the finger; contents dark, dissolved, grumous. Kidneys normal. Stomach natural externally, contains four ounces of grayish liquid; lining membrane coated with its own secretion, the mucous texture itself normal in consistence, affording strips seven or eight lines in length, its color also, for the most part healthy; near the cardiac orifices are seen patches of minute red points in clusters, with some surrounding redness.

Intestines.—Lower portion of ilium to the extent of two or three feet from cœcum, is somewhat discolored externally. Veins of mesentery distinct, dark, moderately full. Small intestines contain a medium quantity of thin grayish fluid; mucous membrane, to the extent of two and a half feet from the ileo-cœcal valve, is uniformly discolored and slightly congested, with a tendency to softening of its texture; elsewhere in all its extent normal in existence and color. No development of Brunner's glands or isolated follicles. Two or three of Peyer's patches are visible, presenting in a slight degree the *shaven beard* appearance, their mucous membrane being entire and healthy. Large intestine contains fæces of moderate consistence, its lining membrane and follicles natural. Bladder contracted. No alteration of mesenteric glands.

Observations.—In Case III. the characteristic features of the disease, its habits, symptoms, and pathological conditions, were well marked. It is an instance of direct contagion occurring in a subject of vigorous health, of fearless disposi-

tion and well tested powers of endurance. The accession of fever was violent. No symptom was engrossing. The morbific agent seemed to expend itself pretty equally on all the more important organs. There was marked prostration from the outset, and throughout the whole course a tendency to exhaustion of the life force. The duration was eighteen days longer than the average.

The case of Salter shows well the frequent manifestations of the disease as presented in those subjects brought into the wards in advanced stages, and who had previously experienced a combination of privations.

The *post mortem* developments in the two cases harmonize well. In neither was there any decided lesions of the brain; the presence of dark, dissolved blood in the sinuses and veins, and the slight effusion beneath the arachnoid, are all that arrest the attention. In the thorax the heavy engorgement of the depending portions of the lungs deserves notice. The contents of the abdomen were characterized rather by freedom from any important alteration. What most arrests the attention is the general dark fluid, and peculiar sizy character of the blood.

CASE V.—Cath. Gaffney, aged 18, landed from ship St. Petersburg, in quarantine, January 7, 1848. January 20th, was admitted to Hospital on Deer Island, about the 8th or 9th day of the fever—a well-marked case of ship typhus. About 30 hours before death, symptoms of jaundice appeared, though not then in a very marked degree. There was the yellow conjunctivæ and general discoloration of the surface, with the customary deep color of urine and light stools.

This patient had no delirium.

Autopsy, 16 hours after death.—Exterior: subject well developed, no emaciation. Muscles large and firm, of good color—much rigidity. Petechial spots on chest, shoulders, and loins, same as in life. Posterior portion of body shows a considerable number of livid patches—superficial, apparently in rete of skin. Chest well formed, and resonant on percussion. Abdomen moderately full and soft, without tympanites. Surface of shoulders, neck, and face, tinged with yellow.

Head.—A few points of dark blood on external aspect of dura mater. Longitudinal and lateral sinuses filled with black, fluid blood—arteries empty—the membrane itself normal; arachnoid transparent, and of usual thickness, with no effusion in its cavity. Pia mater natural; veins between convolutions distinct, moderately full and dark. No adhesion of membranes to each other, or to substance of brain. Surface of cerebrum slightly reddened generally. Cortical substance firm and of natural color. Medullary substance also normal in consistence and hue; its section presents only the usual minute dots of blood. Lateral ventricles contain their normal quantity of serum. Cerebellum natural. Base of brain natural. No unusual effusion in sub-arachnoid space. Medulla oblongata and commencement of spinal cord present nothing remarkable.

Neck.—Lining membrane of trachea is slightly reddened and covered with a thin reddish mucus—œsophagus normal.

Thorax.—Pericardium contains an ounce of thin, reddish serum; no adhesions to its contained organ. Heart of natural size; its walls of usual thickness and consistence; no reddening of its lining membrane; valves normal; a small quantity of coagulated lymph in left ventricle, coated with black, tenacious blood. A medium quantity of greenish yellow coagula in right ventricle. The blood contained in the cavities of the heart and in the aorta is unusually fluid and sizy; its clot, when found, loose, easily broken down; the walls of large vessels smooth and shining, as though moistened by a fluid consisting of water and oil. No effusion into cavity of pleura. Lungs natural on anterior aspect, of grayish white color; crepitating on pressure. Right lung considerably engorged in lower and posterior portions of middle and inferior lobes. Left lung less congested than the other—crepitates in every part, with the exception of a portion of its apex to the extent of one or two inches, which is impermeable to air; no trace of tubercles discernible. Smaller bronchi filled with frothy mucus. Mucous membrane of large bronchi somewhat stained, but natural in consistence.

Abdomen.—A layer of fat, one half inch in thickness, beneath the skin. Omentum loaded with fat. Liver one-third larger

than usual. Color, externally and internally, and consistence, good—vessels gorged with dark, dissolved blood. No disorganization of structure in any part. Gall-bladder of moderate size, filled with greenish yellow, watery fluid. Spleen of natural color externally; five or six inches in length by three and a half in breadth; not softened; its contents dark and grumous. Pancreas normal. Stomach normal externally—contains a couple of ounces of thin straw-colored fluid. Around cardiac orifice, to the extent of about three inches, the internal surface is studded with minute red dots, the membrane being here somewhat softened—as also along greater curve for two-thirds of its extent. Pyloric third natural in color and consistence, the mucous membrane peeling off in strips of seven or eight lines in length.

Intestines, externally present slight discoloration along whole course of duodenum, some portions of jejunum and lower half of ileum, more in colon. Mesenteric veins dark, distinct and somewhat congested. Both small and large intestines nearly empty, containing only a grayish pultaceous fluid, adherent to their walls. Mucous membrane of duodenum reddened, with some thickening and softening. In the upper third of jejunum there is slight general congestion, but no manifest alteration of texture. Lower half of ileum slightly but uniformly engorged. Peyer's patches in half a dozen instances distinctly visible, with, in one or two instances, a little softening of mucous membrane, which softening also extends to adjacent surface. Colon contains no true fæcal matter—its mucous membrane healthy. Brunner's and isolated follicles not developed. Kidneys natural. Mesenteric glands firm and small, none exceeding a pea in size. Uterus and bladder normal.

Observations.—This case presents nothing remarkable, if we except the jaundice which made its appearance a short time before death—a complication occasionally observed, and which has generally proved untoward. Death took place at an earlier period than usual. The autopsy harmonized with those previously made, with the exception of the enlarged liver and spleen, which have not usually been noticed.

CASE VI.—John McLaughlin, 23 years of age, landed from

ship Washington in Quarantine on the 15th of Dec. last. On the 29th of the same month was admitted to the Deer Island Hospital, being then in the first stage of the fever. Had, at time of admission, the usual preliminary symptoms of typhus. Dec. 30th, complained of headache, with pains in back, limbs and loins, and general soreness of muscles, well characterized by the bruised feeling before mentioned—hot and dry skin, dusky hue of face and surface generally, universal sensitiveness of body, and an eruption of florid maculæ appearing on shoulders, chest and abdomen.

On the 5th day from admission all the above symptoms were aggravated. Spots petechial and cover whole body except face, hands and feet—pulse 112, weak, feeble, compressible—a strong, offensive and peculiar odor exhales from the whole surface. On the 7th day pulse 120 and scarcely perceptible—prostration very great. The pulse came down to 112 again on the 9th day, still feeble and compressible. On the 13th pulse was 100 and a little stronger—general appearance improved. This improvement was of short duration, the preceding conditions returning on the following day.

These symptoms of prostration and general depression of the vital energy increased throughout the remaining term of the disease, there being no particular determination of its force to any part. There was, throughout, a dull headache, injected conjunctivæ, and a tendency to delirium at night; but the cerebral symptoms were at no time very decided. There was some cough, accompanied with slight bronchial mucous rale, and dulness on percussion at posterior and inferior portions of the chest. The abdomen was throughout free from pain and tympanites. A tendency to constipation was constant. The patient died on the 22d January, being the 29th day from the accession of fever.

Autopsy 64 hours after death.—Subject is of medium size, well developed. Emaciation very great, muscles flabby. Chest full and resonant. Abdomen sunken. No petechial spots; general discoloration of depending portions of body.

Head.—On removing the calvarium, sinuses of dura mater are found moderately filled with dark fluid blood—a considerable number of small globules of blood sprinkled over its ex-

ternal surface, no thickening or other alteration of the membrane. Arachnoid transparent, of the usual thickness; contains in its cavity a very small quantity of effused fluid. Pia mater a little congested. Veins between convolutions of cerebrum distinct, filled with dark blood. No adhesions of membranes to surface beneath. The brain has a slight uniform redness on its surface. Cortical portion firm, of natural color. Medullary substance likewise of natural color and consistence; a horizontal section reveals numerous minute dark points of blood. Half a drachm of pure serum in each lateral ventricle. On the lower aspect of cerebellum veins are more engorged than elsewhere; substance of cerebellum normal. Base of brain presents nothing unusual.

Neck.—Lining membrane of pharynx slightly reddened. Œsophagus healthy. Some reddening of mucous membrane of larynx and trachea; its texture normal.

Chest.—Each pleura contains in its cavity an ounce and a half of reddish serum; no adhesions between their surfaces; pleura itself normal. Lungs anteriorly grayish white, dotted on the surface with minute mælanotic spots, on their inferior as well as posterior aspect of a deep red hue, which is more intense in the depending portions. The substance of posterior of middle, and posterior and lower portions of lower lobe in right lung, and the same portions in lower lobe of left, is considerably engorged; a section of these parts presents a bright red color, and the larger bronchial tubes here contain a very thick, tenacious pus-like mucus. In other parts the bronchia contain a thin reddish frothy secretion. The whole pulmonary tissue crepitates between the fingers; no traces of tubercle in any part. Diaphragm is stained in the parts corresponding with engorged lung, which rests upon it. Pericardium normal—contains no effused fluid—no adhesions of its surfaces. Heart of natural size and appearance—its walls firm; right auricle and ventricle contain a small amount of yellowish coagulated lymph; left ventricle has a small loose clot of dark blood; a similar clot extends into the pulmonary artery. Valves normal. The blood contained in the heart and aorta is dark, fluid and sizy. Commencement of aorta contains a large firm coagulum of greenish lymph.

Abdomen.—A very slight layer of fat beneath the skin.

Omentum transparent, its vessels well marked. Liver natural in size; a few superficial livid patches on its external surface, in other respects color natural—its structure firm, of natural color—vessels filled with a grumous oily fluid; under surface of left lobe, and to the extent of two or three inches around the gall-bladder on the right lobe, stained of a deep turtle-green color. Gall-bladder of a bronze hue externally, its internal lining also of the same color; distended with a thick tarry fluid, which holds in suspension numerous minute granules. Spleen three and a half inches in length by two and three-fourths in width, natural externally, its internal structure firm, reddish brown; interspaces filled with dark grumous fluid. Pancreas normal. Kidneys normal in size and structure—their infundibula coated with a tenacious puruloid mucus similar to that found in the larger bronchia. Stomach of medium size, discolored externally along its greater curve; contains two ounces of a thick yellowish fluid. The color of its lining membrane generally is a dirty white—around cardiac orifice and along the lesser curve to the extent of three or four inches, mucous membrane is injected in patches and softened—there is discoloration and also some softening in the lower portions of greater curve; pyloric third of greenish tinge, the mucous texture firm, peeling off in strips of ten lines. *Intestines* are somewhat discolored externally, more in lower half of ileum; colon of greenish tinge. Small intestines moderately filled with yellowish semi-fluid fæcal matter. Internally, duodenum is discolored and slightly injected in points—jejunum normal—ileum along its lower third uniformly discolored, the hue deepening towards ileo-cœcal valve—veins of sub-mucous tissue in this portion distinct, dark, congested, which condition is more marked where the general discoloration is greatest—the mucous texture in this portiou of the small intestine is also softened; near ileo-cœcal valve two or three of Peyer's patches were manifest, roughened not raised, darker than the surrounding surface, their mucous membrane entire but softened—higher up a few more were seen obscurely, and presented the dotted appearance before mentioned. Colon filled throughout with softened fæces, its mucous lining of greenish tinge somewhat softened throughout. No appearance of Brunner's or isolated glands. Veins of

mesentery distinct, moderately distended, dark. No alteration of mesenteric glands. Bladder about half filled with reddish yellow cloudy urine.

Observations.—In the preceding case the characteristics of the fever were strongly exhibited. The autopsy was necessarily deferred till a later period than usual after death; the increased discoloration in various parts, and the general softening of the mucous coat in the depending portions of the stomach as well as in a part of the small and throughout the whole course of the large intestines, seemed rather the result of cadaveric change.

[To be continued.]

ARTICLE III.—*On Puerperal Fever; with Cases*, BY ROGER GRISWOLD PERKINS, M. D., of New-York.

FEBRILE symptoms occurring during the puerperal state may arise from miasma, as the typhus, remittent and intermittent fevers; from irritation, as the so-called milk fever, the weed, &c.—or from inflammation. If they arise from inflammation, the inflammation may be common or specific; and both kinds of inflammation may attack different organs in different cases. The common inflammation may be diagnosticated from the specific, even when it attacks the same organs, in different cases; and the organs attacked in one case may be diagnosticated from the organs attacked in another case, even if the kind of inflammation should be the same in both cases.

The inflammations to which the organs of generation and gestation and their envelopes are subject in a puerperal state, are, as said above, of two kinds—the common and the specific; and each of them may be divided in relation to the organs attacked, into four species—the peritoneal, the uterine, the ovarian, the vascular—any two or more of which may occur at once in the same case. These four distinct diseases have in most authors been described 'en masse,' under the general head of puerperal fever, because they are all more or less accompanied by febrile symptoms. From this fact has arisen a discrepancy among authors, in their descriptions of the disease,

which, if they had more attended to the *organic lesions*, would not have happened.

Thus one author, under the name of puerperal fever, describes a list of causes, symptoms and treatment which belonged to a case of metritis. Another gives a history of a peritonitis, under the same general head as the first. The first cures his with purges—the second kills his by the same means. If authors had paid more attention to the *kind* of inflammation, there would have been less discrepancy in their descriptions. Thus one gentleman details a case which he has cured by copious blood-letting, under the general name of puerperal peritonitis, which may have been, and very likely was, a *common* peritonitis, occurring in the puerperal state; while another, under the same name—puerperal peritonitis—treats a specific peritonitis occurring in a recent mother in the same way, and she dies.

The proper way to avoid these discrepancies, is either to drop the term, puerperal fever, altogether, or else employ it as the patronymic of a family of fevers—which family of fevers are the peritoneal fever of the puerperal state—the uterine, the ovarian, the vascular—and in the details of a case of either, the kind of the inflammation which gives rise to the febrile symptoms should be stated.

These preliminary remarks have seemed to me to be necessary, previous to entering upon the object of this paper, which is the history of an endemic occurring among the lying-in women in the 'Shatzel' Department of the Colored Home Hospital during the winter of 1850–1, while I was House Physician to that institution. I now proceed to the history of the endemic, all the cases of which are cases of specific inflammatory puerperal fever, in one of its forms. I shall first consider the *causes* which led to its appearance.

Secondly, state the symptoms, treatment and result of the cases, individually considered, together with the post-mortem appearances when the case resulted in death.

Thirdly, I hope to be able to show the treatment resorted to in the different cases to have been proper, and founded on the organic lesions, and moreover that successful treatment in these forms of disease, depends, not upon specifics, but upon

the adaptation of different remedies to the pathological anatomy, found in different cases.

In the first place, then, as to the cause of the endemic: I have every reason to believe that a post-mortem examination of the body of Mary Murray, who was brought into the Hospital on the 25th of November, 1850, and who died, in an hour after admission, of a peritonitis, which had resulted in a purulent effusion, was (through the necessities of the case) the prime cause of the endemic which followed. The proofs of its introduction by these means are both negative and positive. On the side of the negative proof—*i. e.*, among the reasons why the endemic could have had no other cause, we have the following: The wards before the introduction of this most unfortunate case were, and had been for some time previous, in a high state of cleanliness and order. The success which had attended the treatment of all forms of disease throughout the institution, had, in consequence of the more than usual tendency to recovery, even when unaided by medicine, been at least remarkable.

The site of the building of the institution itself, occupying as it does an eminence near the banks of the East River, and entirely cut off from the ordinary sources of disease connected with densely populated districts, is high and airy. There is great freedom of perflation and ventilation allowed by its position. And lastly, since the Hospital was removed from 42d street to its present site, there had been no cases of puerperal fever in its lying-in wards, till the occurrence of those about to be detailed.

And now for the positive proof of the introduction of the disease by this post-mortem—viz.: the first case which occurred was delivered by the same hand which made the autopsy, on the afternoon of the day on the evening of which the woman was delivered. This last, in connection with the foregoing reasons, has led me to a conviction as to the cause.

CASES.

The first case was Sarah White. She was delivered on the 26th of November, 1850. I made two vaginal examina-

tions. After a more than ordinarily painful labor, she was delivered of a living male child. The placenta came away readily, although accompanied by more than the usual amount of blood. About an hour after the birth of the child, she fell asleep, and continued comfortable through the night.

27th, morning.—Patient doing well, lochia present; breasts beginning to be tumid, and slightly painful. Ordered ol. ric. ℥ ℈.

Afternoon.—Patient's bowels have been gently moved by the oil administered this morning. There are periodic pains in the region of the uterus; a small quantity of milk can be pressed from the breasts; skin rather warm and dry; pulse 90; no tenderness over the abdomen, lochia continues.

28th, morning.—Patient comfortable; afterpains ceased; flow of milk established; lochia continues; no pain on pressure over the abdomen; pulse 90.

Evening.—Patient says she has felt cold once this afternoon; is now quite warm; has slight headache; pulse rather above 90; says she feels quite feverish, and thinks her bowels should be moved, although they moved this morning; tenderness on pressure uncertain; lochia continues.

12 *o'clock.*—Was called to patient and found her in convulsions; she had had several before she was reached, of the most distressing character. Pulse 120. She was bled to the amount of 24 ounces, when syncope was produced. In half an hour the convulsions came on again, and blood was taken from the other arm to the amount of 12 ounces, when syncope was again produced. The convulsions returned with the action of the heart, and she had thirty of the most distressing fits I have ever seen. After a while they ceased, when patient was put upon the mercurial treatment.

R. Hyd. Submur., grs. iij.
Pulv. Opii, gr. ¼.
M. fit. pulv. Take every third hour.

29th.—Patient feels quite comfortable, but has now and then a shooting pain through the abdomen. Tongue slightly furred white. Pulse 112. Abdomen tympanitic and enlarged. Uterus *not enlarged.* Slight pain in the region of

the right ovary. No trouble in micturition. Lochia continues. Med. continued; powder every third hour.

30*th.*—Patient not so well. Pulse 140. Pain in abdomen increased. Tympanites as before, and a settled pain in right ovary; uterus increased in size; lochia stopped. Milk stopped. Ordered hot fomentations to vulva and abdomen. Doubled the quantity of opium in each powder.

Dec. 1*st.*—Patient's bowels moved during the night. Patient is under the influence of mercury. Calomel stopped, but opium continued in the shape of pulv. Doveri. All the symptoms are better. Even the pulse, although 120 in frequency, is more full, and not by any means so quick.

Dec. 3*d.*—A relapse has occurred. The pulse is again thready and quick, and retains its frequency. Uterus much enlarged. Abdomen tympanitic. Pain in both ovaries. Lochia ceased, and the most exquisite tenderness on pressure over the abdomen. Patient still under the influence of mercury, as detected in the breath and state of the gums. Warm fomentations and pulv. Doveri continued.

Dec. 6*th.*—Patient is evidently sinking. Has lost all pain. Pulse 130. Tongue furred dark brown. Diarrhea and efforts at vomiting. Patient's mind clear, and such has been its condition since the commencement of her sickness. Ordered stimulants diffus.

Dec. 10*th.*—Patient moribund. The vomiting has been stopped by mustard plaster upon epigastrium. Tongue covered by dark fur.

Dec. 11*th.*—Patient dying. Stimulants continued. At midnight patient died.

Post-mortem on the following day showed the abdomen filled with dark greenish coloured pus. Uterus in a state of gangrene, and both ovaries completely disorganized. I could detect no phlebitis in this case: *i. e.*, I found no coagulable lymph or pus in the veins examined.

CASE II.—J. P——n was delivered on the 15th of November, while there was no fever in the house, and progressed finely towards a good getting-up, until the 30th of November, just 15 days after the birth of her child. On this day she

called my attention to an intense throbbing pain in the hypogastric region, which she said had followed a severe chill. On placing the hand upon the region of pain a tumor could be distinctly felt; I supposed it to be the uterus. On learning the urine had been retained for some 18 hours, I passed the catheter and withdrew a large quantity of water. I then placed my hand upon the fundus of the tumor, and the index finger of the other hand in the vagina. By pressing upward with the finger introduced, the hypogastric tumor was perceived to be the enlarged uterus. The lochia had ceased. The vagina was hot and dry. The pain in the lumbar region was excessive. Headache and pains in the bones were also present. Pulse 98; full, resisting and slow. Patient was cupped over the hypogastrium. 8 oz.

R. Calomel, grs. v.
Ipecac. Pulv., grs. v.
Opii Pulv., grs. x.
M. fiat pulv. in No. v. Dose one every two hours.

Nov. 30th, afternoon.—Patient is somewhat better. Has taken two powders. Has not had any pain above the umbilicus from the first. Has nothing but the pain in the lumbar region, and the heavy, steady, dull pain in the hypogastrium.

Dec. 1st.—Patient has had an exacerbation of pain during the night. Has taken all the powders. She felt better this morning, however. Pressure over the womb is allowed more tamely than yesterday. Size of the tumor the same. Bowels moved once this morning. Urine drawn. R. pulv. Doveri, grs. x. To be taken immediately.

Afternoon.—Gums tender. Bowels running off with bilious evacuations. Pulv. Doveri continued. Size of tumor not perceptibly diminished.

Dec. 2d.—Salivation established. Tumor beginning to decrease. Ordered tannin wash for mouth, and a grain of opium in case of much pain.

Dec. 3d.—Patient is doing well. Has taken two pills of opium. Urine drawn. Tumor still less. Pulse 82. Diarrhea ceasing.

Dec. 4th.—Patient is doing well. Perspires freely. Urine

drawn without the use of the instrument. Bowels moved twice in the last 24 hours. Mouth slightly sore. Lochia re-established.

Dec. 7th.—Mouth nearly well. Tumor not felt. Lochia.

Dec. 10th.—Patient allowed to sit up.

Dec. 16th.—Patient discharged from lying-in ward to nursery, with child. The secretion of milk was lessened, but did not cease altogether during the whole course of her sickness, and was wholly restored at the time of her discharge.

CASE III.—At this stage of the endemic, I resolved, with the approval of Dr. James D. Fitch, Resident Physician of the Institution, to resort to the treatment suggested and so successfully adopted by Professor Clark, of the College of Physicians and Surgeons.

Mary Thompson was delivered of a male child on the night of the 16th of Dec. There was considerable bleeding. After delivery the woman fell asleep, and remained comfortable till morning.

17th.—Some afterpains. Ordered ol. ricini, which produced a full evacuation.

18th.—Milk and lochia. Pulse 78. Bowels moved naturally.

Afternoon.—Patient has had a chill. Both milk and lochia are ceasing. Pulse 86.

R. Pulv. Doveri, grs. x.

19th, morning, 6 *o'clock.*—Patient cannot contain her shrieks, for pain shooting through her abdomen. Lochia very little. No enlargement of the uterus that can be felt. Abdomen tympanitic and greatly distended. Tender on pressure. Pulse small, thready, incompressible, quick, and 120 in frequency. Urine in small quantity, withdrawn by catheter. Patient was perfectly sensible, and I gave orders she should take 10 grains of opium every hour until the pain ceased entirely. Hot fomentation to abdomen and vulva.

9 *o'clock.*—Patient's pain continues; is somewhat less.

12 *o'clock.*—Patient has some pain.

2 *o'clock,* P. M.—Patient has no pain; has broken out into

a profuse perspiration. Lochia increases. No milk. Pulse 104, soft and compressible. Abdomen slightly tender and tympanitic. Pupils contracted. Slight nausea. Ordered emplas. sinapis. upon epigastrium, and hot fomentations continued. I left her sinking gradually to sleep; sweating profusely. She remained in bed a week longer, with no return of pain. Her pulse continued 104. Slight pain on pressure over abdomen. Bowels did not move. Milk was plenty, and lochia present.

Dec. 27th, noon.—Patient has been up contrary to orders. The most intense pain has again come on, beginning in the right iliac fossa and darting upward to the sternum. Abdomen excessively tender on pressure. Urine retained; skin hot; pulse 108, wiry and quick. I cannot tell if the uterus is enlarged. Lochia less. Again enormous doses of opium were resorted to—having no boundary but the cessation of pain. The effect upon the pulse was remarkable. After, by the gradual administration of the drug, the amount had reached twenty grains, the pulse went up from 108 to 120. Its use was continued, and when 40 grains had been given, the pulse fell to 104 gradually, and patient broke out into a profuse sweat.

4 *o'clock.*—The pulse has again increased to 108 in frequency. The pain seems about to return.

Dec. 28th.—Patient has taken 10 grains of opium per hour till the present 10 A. M. At this time pain has ceased, and she is sleeping. She perspires freely.

Evening.—Urine withdrawn. No pain, but is to take a grain per hour during the night, if awake. Pulse 104.

Dec. 30th.—Patient has had no pain 'worth speaking of.' Abdomen tender and enlarged. *Fluctuation in abdomen.* Pulse 104. Skin warm. Tongue has a white fur upon it. Uterus not perceptibly enlarged.

Jan. 3d.—Fluctuation more distinct. Pulse 104. No pain. Bowels moved.

Jan. 5th.—Was called to patient in the afternoon. Found her in a high state of febrile excitement. Pulse 110. No pain, but a general uneasiness. Skin hot. This state was preceded by a chill, and was followed by a sweat. Ordered pulv. ipecac. gr. i., every hour to promote diaphoresis.

I visited her every hour till 9 o'clock, finding her always in sleep, and sweating profusely.

9 *o'clock.*—I was sent for. Patient had awakened suddenly from sleep, with a cry and a shiver, and had since been delirious without violence, but wandering. Pupils alternately contracting and dilating. Knew no one about her. Eyes set; hands and feet cold. Pulse 120, small and weak. Tongue had a brown fur upon it. Head very hot. Ordered external heat; cataplasms to extremities; diffus. stim. Before these things could be got ready, the *pulse had left the wrist.* Reaction took place, and in one hour she was in a high state of fever, with the pulse up to 120. This was followed by a sweat, which was brought out by ½ oz. tinct. opii.

At 4 o'clock in the morning I left her sleeping, with no pain, and still in a perspiration. She continued to sweat till noon next day, when she had another chill, fever and sweat, and to-night complains of nothing. She is still sweating. She wishes a sleeping draught. Ordered tinct. opii, ½ oz.

Jan. 8*th.*—Last night patient slept well. I saw her every hour in the night. Each time she was sweating. I seem to detect a sour odor in the perspiration. These symptoms seemed to me to depend upon the absorption of changed pus, and therefore

R. Hyd. Pot., grs. iij.
Tinct. Opii, ℥ ij.
Aqua Font., ℥ iv.
M. fiat solutio.
Dose half oz. every 3 hours.

Jan. 10*th.*—Febrile symptoms have disappeared. Patient has no pain; bowels moved by comp. tinct. aloes; pulse 98; appetite inordinate; farinaceous diet.

Jan. 20*th.*—Patient a confirmed convalescent; walks about the ward; pulse 86; feet œdematous, and patient generally much emaciated; bowels regular. Ordered bandages to extremities and nourishing diet.

Feb. 1*st.*—Well enough this day to attend the christening of her child.

Feb. 12th.—Entirely well to all appearance; discharged about a fortnight after to go to service.

I have seen this patient since her discharge; she is quite healthy, and has rapidly gained her lost flesh. Her milk was effectually dried up by the amount of opium she took, and has not returned. She needs and takes no medicine.

CASE IV.—A—— W—— was delivered after a tedious labor of 48 hours, of a boy, at 8 o'clock, P. M., Jan. 5th, 1851. After delivery patient fell asleep, and remained comfortable, with occasional afterpains through the night.

Jan. 6th.—Bowels moved this morning by castor oil; pulse 82; lochia and milk; no afterpains; tongue clean.

Jan. 7th.—Patient doing well; bowels moved; pulse 80; tongue clean.

Evening.—Has slight pains in os frontis; skin rather hot; pulse 86, and somewhat quick; abdomen slightly painful on pressure. R. pulv. Doveri, grs. x. To be taken immediately; left orders to be called, if patient should have more pain during the night.

Jan. 8th.—Called at 8 o'clock in the morning: patient has slept but little during the night. Skin hot and dry; eyes glassy; tongue clean; pulse 128, quick, wiry and incompressible; intense pain shooting up from the right iliac fossa towards the sternum, causing her to cry out with agony; very much pain on pressure over the abdomen, which is tympanitic; respiration high, and at the end of every inspiration a sharp pain shoots downward through the abdomen; patient lies with legs flexed upon the thighs, and thighs upon the pelvis; urine retained; introduced the catheter; small quantity of water withdrawn; lochia present; no enlargement of the womb discoverable. R. tinct. opii, 1 oz. to be taken at one dose immediately; ordered warm fomentations to abdomen.*

9 *o'clock*, A. M.—Pain is much less, but there is slight pain still; pupils contracted; pulse 128; R. tinct. opii, ʒ ii.

---

* Attention is called to the violence of the symptoms, in defence of this, and the large dose in the next case, admitting no doubt as to *diagnosis.*

12 *o'clock.*—Patient has been sleeping half an hour; breathing regular; left orders to be called when patient waked.

8 *o'clock*, P. M.—Patient has just awoke; she is sweating profusely; pulse 114; no pain. Ordered pulv. Doveri, grs. x.

Jan. 9th.—Patient slept well; has lost all pain; feels quite well; lochia, which have continued throughout, have come on profusely.

Jan. 12th.—Bowels moved with but slight pain; patient kept very quiet in bed; diet meal gruel; nothing else.

Jan. 15th.—Patient wishes to rise; bowels moved; diet farinaceous.

Jan. 20th.—Discharged from lying-in ward.

CASE V.—A. B——n was delivered 25th Dec., of a girl; has a fibrous tumor on the fundus uteri, making the whole organ equal in size to a child's head; bowels were moved the day after delivery; afterpains gradually ceased; every thing went on well till

Dec. 29th, noon.—Called to patient; found her with every symptom of peritonitis, and with a pulse of 130; lochia free; milk less; the symptoms were very much the same as in the foregoing case, No. IV. Ordered tinct. opii, 1 oz. to be taken at once.

P. M. 8 *o'clock.*—Patient's pain is less; ordered a repetition of the dose; hot fomentations to abdomen.

Midnight.—Saw patient in sleep and perspiring.

Dec. 30th.—Patient has slept 9 hours; has just waked; feels perfectly well; pulse 104, soft. R. pulv. Doveri, grs. x.

Dec. 30th.—Evening. Patient complains of nothing.

Jan. 3d.—Patient doing well; pulse 92; bowels just moved.

Jan. 4th.—Pulse 86; diet farinaceous.

Jan. 14th.—Discharged from lying-in ward.

CASE VI.—Blandinia West was delivered Jan. 28th, 1851, of a dead child; breech presentation.

Jan. 29th.—Bowels have been moved by ol. ricini, without pain; lochia free.

Afternoon.—Complains of headache, and abdominal bandage too tight; bandage loosened.

Evening, 8 *o'clock.*—Has had a severe rigor; reaction has come on; pulse 118; patient has had shooting pains in the abdomen since about 5 o'clock; abdomen is exquisitely sensitive to pressure; lochia and milk stopped; vagina hot and dry; uterus *seemingly* enlarged; there is so much tympanites it is impossible to be *certain* whether the uterus is enlarged. Ordered tinct. opii, 1 oz. Cataplasms to abdomen, and hot fomentations to vulva.

10 *o'clock*, P. M.—Patient retained the opium, though she suffered considerable nausea from it; patient has no pain, but is in very low spirits and great despondency as to the result of her sickness.

1 *o'clock in the morning of the* 30*th.*—Patient was sleeping; skin hot and dry; pulse 116—perhaps 118.

9 *o'clock.*—Patient has but little peritoneal pain, but there is present a dull, heavy burning pain just over the pubes; lochia still absent; tympany less; hypogastrium tender; size of the uterus slightly increased; pulse 106. Ordered hot fomentations to abdomen and vulva; she continued in the above condition during the day.

Feb. 1*st.*—This morning patient had a chill, followed by a cold sweat, in which last I found her; she is gazing vacantly upward; semi-comatose—answering only when loudly spoken to, and then only by a movement of the head, slow and doubtful; she shrinks from hypogastric pressure; feet and hands cold; tongue covered with dirty white fur; pulse 120; small and weak. Ordered external warmth and stim. diffus.

In a few moments the extremities were warm, but the semi-comatose state continued; fæces passed involuntary; urine dribbling from the meatus; bladder contains hardly any water; on examining the vulva and parts adjacent, I find a dark red line extending down the inside of the thigh, which seems the result of inflammation of the cutaneous veins, also, the cutaneous veins can be traced, seemingly injected, upon the integuments of the iliac region, and some ways up toward the umbilicus. Being convinced that the patient was suffer-

ing from phlebitis, in which the veins of the uterus were perhaps involved, and having seen good results follow the exhibition of the Hyd. Pot. in cases of pyemia administered by Dr. Edwardus Webber, a gentlemen of the highest accomplishment in every thing pertaining to professional knowledge, I determined the patient should take the following:—

R. Hyd. Pot. ℥ ij.
Tinct. Opii, ℥ ij.
Aqua Font. ℥ iv.
M. Dose ½ oz. every two hours.

Feb. 2*d.*—Patient has come out of her semi-comatose condition; urine drawn in large quantity; high colored and turbid; the evidences of a poisoned nervous centre, arising from absorbed pus, have disappeared; pulse 98.

Afternoon.—Patient doing well; beginning to perspire; pulse 98.

Feb. 3*d.*—Patient has lost all pain, but the color of the inflamed cutaneous veins is not changed from its appearance yesterday; patient in good hope; quite lively; sweating continues.

Feb. 6*th.*—Patient has taken no medicine since yesterday morning; feels perfectly well; no traces of inflammation in the cutaneous veins referred to above; ordered rest in bed.

Evening.—Bowels moved naturally, and without pain.

Feb. 10*th.*—Patient convalescing, but feels very weak; diet nourishing.

Feb. 16*th.*—Allowed to rise; extremities swelled; in right ancle joint fluctuation is distinctly felt; ordered bandages, and

R. Hyd. Pot. ℥ ii.
Aqua Pura, ℥ vj. Dose ½ oz. three times per diem.

Feb. 20*th.*—Swelling disappeared.

Feb. 24*th.*—Discharged from lying-in ward.

The history of the six cases given above has been taken from notes made at the time the disease prevailed in each individual patient. If any incompleteness is observed in their narration, it will be remembered the record was, when made, intended to appear in no such place as this, but simply as a

memoranda of interesting and difficult cases. I have changed nothing nor added any thing, as at this distance of time, any interpolation might be open to objection and perhaps mistake.

In the review of Case I., I have but little to say. As the symptoms indicated, and the post-mortem proved, there was a gangrenous peritonitis accompanied by a purulent effusion, and ovaritis resulting in complete disorganization. She was treated as have been thousands of women in the same disease, and with the same lamentable result. The grand mistake being in depleting a specific inflammation, instead of palliating the most distressing symptoms of pain, and allowing the disease to cure itself before the patient is worn out by suffering.

Now in Case No. III., in which opium was given in such enormous quantities, a case, observe, of peritoneal fever, the results were sufficiently satisfactory, though not the happiest which could have been wished. The large doses of the drug, through their effect in removing the sense of pain, husbanded the strength of the patient in such a manner, that, though the inflammation went on to effusion, and as I firmly believe, of pus—the system was able to recover from the shock, and absorb the effusion assisted by the remedies proper for such cases. Let me not be misunderstood as saying that opium possesses no curative properties in this disease, aside from those included in lulling the patient's pain, and consequently saving her strength until it shall be needed to recover from the shock of the disease.

I think I have every reason to believe from the experience gained in Cases IV. and V., that when the disease first makes its appearance, the effect of opium upon it by keeping the intestines perfectly still, by promoting diaphoresis and sleep, and by these means allowing the circulation to resume gradually its wonted current—is essentially curative. I am also inclined to think, that if in Case No. III. I had been governed by the pulse, as to the amount of opium given, rather than by the point of relief from pain, there would have been no effusion.

In Case No. II. there was no peritonitis, but there was evident metritis. This was rendered probable by the suppression of lochia, and certain by the additional fact of the enlargement of the organ.

The benefits arising from the constitutional effects of mercury upon parenchymatous inflammations have been long known. The good results of topical depletion are also acknowledged; and, as this treatment was successful in the case given above, and as it was proved so in other cases of common inflammation of the womb, I see no reason why it should not be generally employed.

Inflammation of the womb is not uncommonly accompanied by phlebitis of the organ. Lest, by the installation of the effects of opium, the symptoms of inflammation of the womb might be so disguised as to lead to the supposition of a phlebitis which did not exist, I should in general avoid giving it in large quantities.

It remains to refer to Case No. VI. The commencement was an attack of peritonitis, which was relieved by the opium; but metritis followed, or may have accompanied it; but it was impossible during the existence of the peritonitis to diagnose this from the pain occasioned by the pressure upon the hypogastrium necessary to form an opinion. This metritis was accompanied by phlebitis of the leg, and, in all human probability, of the uterus. The disease yielded, and she recovered under the hyd. pot. By reference to the case it will be seen that there is good reason for certainty that the diagnosis was correct. This drug was used with great advantage in Case No. III., where I had every reason to suppose the hectic fever, which was present, depended upon the absorption of pus. The superiority of this medicine in the promotion of absorption of effete matters and conveying them from the system, over any other drug which is used for a similar purpose, is so apparent it would be useless for me to enlarge upon it.

It will be noticed that the lochial discharge ceased entirely in the case of metritis; that in the case of phlebitis of the womb it was very much lessened, and that in all the other cases it was decreased but slightly. Hence, it would seem that absence of lochia depends more or less upon metritis; and that, unless this state exists, the lochia will continue, though lessened by the general febrile state of the system. It will also be noticed that the pulse in Case II. was larger and more full, and at the same time less frequent than in the other cases;

this fact, in relation to the pulse, has been many times observed in parenchymatous inflammations.

From the experience gained in the cases cited above, the doctrines of a specific treatment for puerperal fever is abandoned by the writer. Because a woman has child-bed fever it is no sign she should be deluged with opium; but if these febrile symptoms, occurring in child-bed, depend upon an inflammation of the peritoneum, opium should be withheld just this side of narcotism only; and the rules for diagnosing peritonitis are laid down in books; and what are wanting in books must be made up from experience. Neither because a woman has puerperal fever must enormous doses of iod. potassium be thrust into the stomach; but if the physician has reason to believe uterine phlebitis exists, it seems to the writer his duty to, at least, try the remedy named, and which has been so successful in his hands.

I do not know whether opium has cured a case of puerperal *metritis* uncombined with any other lesion or not; but I know that the only patient I have ever treated for the disease was cured by *mercury*, or, at least, recovered under its use; and, if allowed, I should treat a hundred cases in the same way.

My experience as to the effects of *blood letting* in puerperal fever amounts to this: I, in obedience to the dictates of Gordon, Armstrong, and almost every other author who has ever written upon the subject—from Hippocrates and Avicenna, down to him of distinguished reputation, Professor Meigs of Philadelphia, bled a woman to syncope twice; and she died with typhoid symptoms. I will not say that I shall never bleed another; for, in certain cases of marked plethora it may be advisable; but as a general thing, I shall as soon think of bleeding in typhus fever.

ART. III.—*On the Communicability of the Cholera Asphyxia.* By JOHN W. STERLING, M. D., Assistant Physician of the Marine Hospital, Quarantine, N. Y.

NOTWITHSTANDING this disease has been presented to the medical profession so frequently that we have been surfeited with

it almost *ad nauseam*, yet whatever light can be shed upon its communicability, or upon the means of arresting its progress, cannot fail to be important; and as it is possible the following narration may tend this way, I will as briefly and clearly as I can give a sketch of the visitation of the cholera at the Marine Hospital, in October, 1851 :

On the 21st Oct., Julia McCartney, aged 18 years, who had arrived from Liverpool in the Isaac Webb on the 20th Sept., was sent from the city to the Marine Hospital with typhoid dysentery, or rather putrid diarrhea of a most formidable character. She was admitted into Ward No. 2, of the Lower Hospital, and intothe middle room. Her evacuations from the bowels were copious, intermingled with dark-colored blood, and the fœtor arising from them was so intolerably offensive as to impregnate the ward to such a degree that free ventilation and the liberal use of disinfectants could scarcely dispel it. The usual remedies were of no avail in arresting these evacuations, and she died on the 25th, four days after her admission.

On the 21st also, Bridget Cunningham, aged 45 years, who had arrived in the Hemisphere from Liverpool on the 1st September, was received from the city into the south room of Ward No. 2, in a cold congestive state. Her skin was pale and cool, pulse flat; voice natural, no perceptible secretions or excretions. Various efforts, by means of external and internal stimuli, were made to produce reaction, but unavailingly. Brandy was given liberally, but produced no excitement; and as the woman said nothing would cure her but whiskey, a bottle of which was tied up in her bundle, on the evening of the 23d I ordered her bundle to be brought into the ward and opened. The bottle was found, but the whiskey was not. The contents of this bundle were neither positively clean nor filthy, and evolved no peculiar odor. About four or five hours after this the cholera broke out in this ward. This fact may have had nothing to do with its outbreak; but as the cholera did exist at Cow-bay near the Five Points about this period, and as we could not ascertain where this woman had lodged in the city, I thought I would note it.

On the 20th of October, Mrs. Mary McMahon, aged 38 years, with her daughter Mary Harvey, 11 years old, were admitted

into the same ward and room from the city; the former with acute pleurisy, the latter with fever. They arrived four days previously from Liverpool, in the packet ship Liverpool.* About 10 P. M. of the 23d, the mother, and, half an hour afterwards, the daughter were violently attacked with incessant vomiting and purging of light-colored liquids, attended with faintness, upturned eyes, &c. The nurse applied external warmth, sinapisms to the stomach, wrists and ancles, gave them ten drops of spirits of camphor and afterwards brandy and water. These means failing to arrest the discharges, I was sent for. I found them both lying in one bed (though previously to the attack they had been in opposite corners of the room, three beds intervening); pulseless, whispering and almost inaudible voice in the elder, shrill in the younger, and with other symptoms of the cholera. The mother died at 4½ P. M. on the 24th; the daughter lived until a quarter past two A. M. of the 25th.

While attending these two patients, about 1 o'clock A. M. of the 24th, Mary Ann McVey (admitted into the hospital on the 20th of October, and who had arrived in the Hungarian from Liverpool on the 13th of said month), occupying a bed in the corner of the same room diagonally opposite to that of Mrs. McMahon, called out, "Doctor, Doctor." I went to her bedside, she complained of her head feeling cold. I felt for her pulse, applying my fingers to both wrists, but could not detect it. Her countenance was scarcely shrunken, neither was it dark like that of the two former. Five hours had scarcely elapsed, however, ere she voided copious thin dejections, which soon assumed the rice water character, and afterwards became less profuse. She died with all the symptoms of cholera at 3 A. M. of the 26th.

---

* Dr. A. H. Stevens in a communication to the Legislature of N. Y., Document No. 146, March 9th, 1849, states:—"The papers this morning inform us that a vessel from Liverpool had arrived at the port of New York with 400 passengers, forty having died of cholera during the passage. ‡

‡ Arrived.—The ship Liverpool, Capt. Eldridge, from Liverpool, having lost some forty passengers at sea by sickness supposed to be cholera, and having many on board still sick. The ship was officially visited by Dr. Whiting the Health Officer, and there is now no longer any doubt that the cholera is and was on board that vessel.—*Courier & Enquirer, March* 8th, 1849.

About 11 o'clock A. M. of the 24th, Cath. Burns, aged 50 years, who arrived in the Washington on the 3d of June, and was admitted into the hospital October 9th, was seized with this disease. She had occupied the bed next to that of Mary McMahon (the woman first attacked), and had been transferred to a distant apartment. She was attacked with vomiting, soon succeeded by copious dejections, half a gallon at a time, to arrest which a pill of opium was administered. She was removed to the cholera ward, where she became collapsed but recovered from this disease. Subsequently, however, she was severely afflicted with profuse purulent discharges from enormous abscesses in the sacral and parotideal regions, and eventually died with typhoid dysentery on the 17th of December.

The next person attacked was Julia Spillan, on the afternoon of the 24th Oct. She had been brought into the hospital four days previously directly from the ship Wm. Hitchcock, and was put to bed in the room adjoining that in which the cholera broke out. She had been removed, with the other patients to a remote part of the building, but, so soon as the disease manifested itself in her, was conveyed to the cholera ward. She died on the 25th at 5 P. M. In this I administered the subnitrate of bismuth, which arrested the vomiting; but the other symptoms assumed a more aggravated form, and the glimpse of hope previously entertained was thereby utterly extinguished.

Next came Ann Goodwin, 11 years old, who was admitted into the hospital on the 15th of October, and lay in the room adjoining that in which the cholera appeared, when she was removed to a more distant apartment. She was attacked on the morning of the 25th, and immediately re-transferred to the cholera ward. This girl recovered from the cholera, but still remains in the hospital, having been the subject of febrile and other affections which are often the sequelæ of this disorganizing malady.

Mary Devine, brought from the ship William Hitchcock with typhus, October 2d; was placed in bed in the room adjoining the cholera ward, but with others likewise removed to a distance. She was seized on the 25th at 10 A. M., and re-

conveyed to the cholera room. Discharged cured on the 24th of November.

Margaret McEvoy arrived in the Isaac Webb on the 22d of May, and was admitted on the 1st October with typhus; afterwards had intermittent fever. She at first occupied the cholera room, from which she had been removed, and again brought back when seized with the disease, which was at 8 o'clock A. M., of the 26th. Discharged cured December 9th.

The last case was Anne Stewart, who was admitted from the ship Ottowa on the 18th of October with typhus, and put to bed in the room adjoining the cholera ward. She was, after being transferred, seized with the cholera on the 26th of October in the afternoon, and again brought back. She died in about 50 hours after seizure with this disease.

After this no new case of cholera appeared in the hospital, and it is to be observed that the foregoing cases occurred in the cholera room, strictly so called, and in the room next to it, and that Julia McCartney occupied both of these rooms at different times previous to, and during the visitation of the cholera.

(At this period each of the four wards of the lower hospital consisted of three rooms, each of which was capable of accommodating comfortably nine patients, and each room was separated from the others by plaster partitions, having doors of communication. As soon as was possible, after this advent of the cholera, Dr. Doane caused these partitions to be torn down, substituting pillars of Virginia pine for the support of the ceiling, by means of which each ward is converted into one spacious saloon, a beautiful transformation, productive of much comfort to the patients by the cheerfulness it presents, and the unobstructed ventilation it affords. Had not death prevented, Dr. Doane contemplated a similar alteration in the Hill Hospital, which would have been a still greater improvement.)

From the foregoing detail it appears evident that the propagation of the cholera was arrested by the sequestration of its subjects. As soon as Dr. Doane was notified that the cholera had invaded the lower hospital, though ill (for he had just risen from his bed to which he had been confined several weeks in consequence of a severe contusion), he came immediately down, and directed all unnecessary communication to

be cut off from the room in which it existed; and with the exception of Mary Condon, who was rapidly sinking under typhus, and Julia McCartney, who was dying with putrid diarrhea, all the patients not laboring under the cholera in this and the adjacent rooms, were forthwith removed to a distant part of the building; and the doctor further ordered that whenever and wherever the disease manifested itself the subjects of it should be transferred without delay to the cholera ward.

How different this from the course adopted during the previous visitation. In the year 1849 the cholera patients were disseminated here and there throughout the different hospitals at Quarantine for weeks, if not months, after the cholera had made its appearance. Those who had not the disease as well as those who had it often occupying the same room, and even lying in beds side by side. Hence we are not surprised at the great mortality attendant upon the cholera that year, which, according to the report of Dr. F. Campbell Stewart, was not less than one hundred and seventy-five.*

ART. IV.—*Case of Concussion of the Brain.* [Read before the Chenango County Medical Society, January 13th, 1852.] BY WILLIAM D. PURPLE, M. D.

ON the 23d of August, 1851, I was called to visit Seymour Marium, aged 30 years. I found him laboring under a very severe concussion of the brain, arising from an injury resulting from a fall from a horse. The horse was young and spry, but while on a free gallop, he hit one of his fore feet against the hind foot of another horse who was his competitor in the race, and fell. He threw his rider over his head on the beaten road. The fall was a severe one; indeed from the rapidity of the motion of the horse it could not have been otherwise. He fell upon the left side of the head which sustained the whole shock of the accident. There was a slight scratch near the outer canthus of the left eye, which caused a free ecchymosis

---

* See *Annual Report of the Physician of the Marine Hospital to the Legislature.* March 26th, 1850. Page 6.

of the eyelids upon that side. This was the only evidence of external injury that could be discovered.

The injury was received about 4 o'clock, P. M. I saw him about 6 o'clock. He was cold, and nearly pulseless; had been bled about a pint from the arm, by a layman, within ten minutes after the accident. He was speechless; his respiration labored, but not stertorous; his deglutition difficult; his senses were entirely locked up, and he was apparently unconscious of all external impressions. His muscular power was full and energetic; pupil of the eye dilated; pulse 58.

Warmth to the extremities, friction with warm flannel over the body, with teaspoonful doses of brandy in warm water, constituted the treatment for six hours; during which time he vomited frequently, and heat was restored to his limbs. His pulse had increased in volume, but not in frequency, with occasional intermissions. He was bled about a pint from the arm, and cold applications were applied to the head. These operations were resisted with great muscular vigor, and he unconsciously evinced much defensive power, both of mind and body.

Second day.—Symptoms about the same; pulse 54, rather feeble, much more so in the left arm than in the right; very restless and uneasy, with occasionally a sigh, denoting physical distress; perfectly unconscious and speechless.

Third day.—The symptoms remained the same during the day. Had passed urine freely, and taken a little broth; at evening he had a slight exacerbation of heat, with increased restlessness. This was accompanied by priapism, without the least evidence of delicacy; his pulse during the day was 56. He had so far recovered his speech that he could say yes, and no, but without evincing any mental action. Treatment, cordials and very moderate stimulants, with a darkened room, and no company to create mental excitement. Patiently waiting for the reaction of the second stage of transition.

Fourth day.—The patient had so far recovered his speech that he could utter three or four words, but with a single idea, and that often a confused one; appears to know his friends by sight and hearing, but cannot recall names. He is exceedingly irascible, and has periods of extreme restlessness. Gave

a free dose of olem Crotonis, which catharticised very freely in the evening. Other treatment the same.

Fifth day.—No evidence of reaction; pulse 52; extremities cold; clammy sweat over the whole surface of the body; exacerbations of excitement less frequent, and of shorter duration. His priapism has subsided, is more mild and quiet, has less combative propensities; says very little more than he did yesterday, has an acute taste for what he likes or dislikes, and governs himself accordingly; receives and masticates a little food; rises from the bed to urinate when it is suggested to him. Treatment the same, with one drop Croton oil every 4 hours.

Sixth day.—His physical and mental systems are about as they were yesterday. The oil has irritated his bowels, but produced but little evacuation. His skin is quite cool; pulse the same as yesterday. High nervous excitement. This is evinced by his consciousness of the slightest tread. His sight is perfect, but it lasts but a moment. Cannot fix his attention but a single moment; takes rather more food. Treatment the same, except the Croton oil; applied cold lotion to the head.

Seventh day.—Appears about as yesterday; not the least excitement of the system. Head and body cool; pulse 50, and not quick; mind a little aroused; says he has pain in the back of the neck; looks pale, and is becoming emaciated. Applied flannel next the skin over the whole body; a blister on the back of the neck; a generous diet, in which he is inclined to indulge.

Eighth day.—Little or no variation in his symptoms. His warmth is more general; skin moist, inclined to perspiration. The pupil of the eye more regular in its contraction. His pulse is 52, and feeble. His mental powers somewhat improved.

Tenth day.—But little variation in the symptoms; pulse 50; conversation mostly incoherent, occasionally correct remarks. Knows where he is, and wishes to go home; little or no knowledge of the injury, or of what has transpired since.

Twelfth day.—The patient was taken home, a distance of four miles. His ride did not particularly affect him. I visited him on the twenty-first day after the injury. Found him much

improved—his mental faculties far above the last report. He answered all questions readily, and talked of matters of ten years since correctly. His senses were perfect—was restless and uneasy, and impatient of restraint—would travel about the farm in a very unreasonable manner. Had no recollection of the injury, or the circumstances which immediately preceded it. His appetite good, sleep regular, skin warm—his pulse but 50, and had not been above that number.

From that time until January 1st, he slowly improved in his mental manifestations, but he is not deemed by his friends as being "regular." He says he has no recollection of what passed after four o'clock on the day of the injury, when he looked at his watch, and with his companion was about to start for home—all subsequent was a blank, and he in vain attempted to recall it for a number of weeks, until another period equally definite, when it suddenly came to his mind. His physical system is in a healthy condition; his weight and strength is as formerly, but his mental powers do not allow him to pursue any regular employment. His pulse is but 52, and he says it has ever been as low, and I understand it is a family characteristic.

The interesting points, if not the anomalous characteristics in the above case, will be apparent to every member of this Society, and may be mentioned under the following heads:

1st.—The severity of the injury may be conceived by reflecting that the subject is a heavy man of about 180 pounds, that he was thrown from a running horse, and alighted on the beaten track of the road, on his head, and this without a perceptible fracture of the skull.

2d.—The entire absence of the least evidence of *reaction* in this case, is, in my experience, an anomaly in injuries of the head, and all the authorities I have been able to consult concur with that expression. The pages of the Bells, Coopers, Abernethy, Potts, Liston, and others, all teach us that the first stage of concussion can be of but short duration, and their warning voices to the surgeon are raised to caution him to be alive to the momentary expectation of *reaction*, and the great danger of delay in resorting to antiphlogistic treatment, to arrest the danger of excitement on the debilitated tissue of the brain.

3d.—The practical deductions of all authority in dividing the symptoms of concussion into the *first* and *second* stages, were here entirely nugatory, as there was not the slightest evidence of the advent of the second stage, as the pulse was never above a healthy standard, neither in frequency nor in volume; and such is the evidence of all concurrent authority on this subject, that I should hardly be willing to trust my individual veracity, or my perceptive powers, in marking symptoms, had I not the testimony of many of the medical gentlemen of this county to the facts here stated, and also that I watched him closely, at least twice in each day for the first six days after the injury.

4th.—It will be seen that but little active means were resorted to in the treatment, and with the exception of the bleeding some eight hours after the accident, it was such as was indicated in the *first* stage of action; and as the second never appeared, the treatment applicable to it was not resorted to; yet the recuperative energies of the brain were able to restore its vital power, and he was restored to comparative health.

ART. V.—*Fracture of the Pelvis.—Compound Fracture of the Olecranon.—Rupture of the Bladder?* By JOHN O. STONE, M. D., Surgeon to Bellevue Hospital. Reported by A. P. DALRYMPLE, M. D., Assistant Surgeon.

JAMES HENNETTY, aet. 30, native of Ireland, admitted Oct. 7th, 1851. His occupation was that of a ship carpenter.

On Saturday, Oct. 4th, while engaged at his work on a scaffold about a ship, he fell to the ground, a distance of fifteen feet, injuring the left elbow and left hip, which came in contact with a block of timber. He was unable to arise after the injury, and was carried into a neighboring house, where he remained without surgical attendance until his removal into the hospital. During the three days which intervened between the reception of the injuries and his removal to the hospital, he did not suffer any great amount of pain, or think his injuries to be severe. He had a very good appetite, regular evacuations from his bowels, and passed his urine as naturally as

ever. On admission there was considerable constitutional disturbance—a hot and dry skin—coated tongue, and pulse full and about 100.

There was found to exist a compound fracture of the left olecranon. The wound through the integument was quite small, hardly admitting the end of a probe. Synovial fluid oozed through this opening. The injury to the hip or thigh was not easily recognized. At first fracture of the neck of the thigh bone was suspected. There was a fulness about the top of the thigh, and a slight shortening of the limb, but the foot was a little inverted. The glutei muscles were bruised, as indicated by the discolored shin. On raising the thigh and rotating, it was found, however, that the trochanter described a large arc of a circle. He complained of a loss of power in this limb, and yet could, by his own efforts, flex the knee and raise the thigh from the bed. In doing so it was observed that the large muscles on the back of the limb did not contract as usual, and as they did on the right thigh, but hung down, flabby and pendulous like a bag. The paralysis of these muscles was attributed to the contusion they had received.

A fracture of the neck of the bone could not be diagnosticated. Dr. Stone then invited Drs. Parker and Van Buren to see the case with him. While one stood upon the bed and seized the patient's limb, the knee being flexed, and made traction, a crepitus could be felt and also heard by the bystanders. When after traction, the limb was pushed upwards towards the acetabulum, a loud and prolonged shock was produced, like to that which accompanies the return of a dislocated bone to its socket. This was particularly perceptible when the hand was applied to the trochanter, or to the tuberosity of the ischium, far back towards the socket.

It was therefore concluded that the pelvis was broken, and probably the acetabulum driven in. This opinion was confirmed, when, upon the introduction of two fingers in the rectum, traction and relaxation of the thigh being continued as before, the ramus and tuberosity of the ischium were found to accompany the thigh and to be attended with crepitus.

On his admission, the bladder was found distended with urine, and there was inability to evacuate it. Before his ad-

mission, he could pass his urine without difficulty, according to his own statement.

Treatment.—The urine was drawn off by the catheter, the arm furnished with a long splint, in hopes of obtaining union of the integuments at the elbow; and Desault's long splint was applied to the injured lower extremity. A dose of ol. ricini was administered.

Oct. 9th.—The oil operated. The elbow joint was found to be distended with pus and synovial fluid. The dressings were consequently removed, and the fore-arm flexed and supported in a sling. The urine was also drawn off by the catheter. Gruel diet allowed.

Oct. 15th.—Pulse 100. The retention continues, and the urine is drawn off two or three times every 24 hours. There is a large quantity of mucous sediment in the urine. Patient has not a very good appetite. Is allowed extra diet, viz., beefsteak, eggs, and brandy.

Oct. 16th.—Pulse 90. Passed some urine without the catheter, but this seems owing rather to the distention of the bladder than to its muscular contraction.

Oct. 19th.—There is much sediment of mucus, with phosphates to be seen in the urine when drawn off.

Oct. 20th.—Can pass his urine very slowly on straining, but it causes so much burning pain along the whole course of the urethra, that he prefers to have it drawn by catheter.

Oct. 21st.—Pulse 100. Skin hot and dry. Has a glairy and bloody expectoration, symptoms of pneumonia. Has emaciated considerably.

Oct. 23d.—No more expectoration indicative of pneumonia. Urine ammoniacal—*stains the catheter of a dark color.* The sediment is thick and ropy.

Oct. 28th.—Urine highly ammoniacal; full of thick ropy mucus. The bladder does not contract after the catheter is used, all of the urine is not therefore drawn off. Pulse small and frequent. Is to take through the day infus. pareir. brav. et lini. lem. Takes a half-pint of brandy every 24 hours.

Oct. 30th.—Suffering greatly from the sharp burning pain in the bladder. The urine is so thickly charged with ropy sediment, that the eyes of the catheter have been enlarged in

order to facilitate its passage; yet this is only partially effectual, as some urine is left after each attempt is made.

The discoloration of catheter, first noticed the 23d, has continued all the time. Patient much emaciated. While sleeping sweats profusely. Has very little appetite.

Nov. 1st.—Pulse 120. Cannot draw off any urine. Bladder much distended. Warm water injected, but brought away only the slightest quantity.

2 *P. M.*—Catheter again used. Warm water injected, and pressure being made over the bladder, after much perseverance, about one quart of muco-purulent urine was drawn by catheter.

Nov. 2d.—Had less pain last night; slept better. About a pint of muco-purulent urine drawn off.

Nov. 4th.—Pulse 108, and very small. Catheter still discolored; a great deal of pus in the urine. Is much emaciated. Very little appetite.

Nov. 6th.—Died at 4 P. M.

Autopsy eighteen hours after death.—On making an incision through the walls of the abdomen, the knife passed immediately through the walls of the bladder, which were perfectly adherent to the abdominal walls. The internal surface of the bladder was black and sloughy. The discoloration passed through the walls of the bladder, and pervaded one-half of the thickness of the recti muscles. The bladder was half full of urine and pus. There were three openings through the bladder communicating with the abdomen. Two to the left of the spinal column; one of which was posterior, and nearly an inch in diameter, the other was at the left of this and smaller. These did not communicate with any abscess. The opening on the right side of the spinal column was about an inch in length, and half an inch wide, communicating with an abscess half full of urine and pus, extending up and behind the peritoneum on the right side of the spinal column as far as the diaphragm. The odor from this collection of matter was highly offensive, like to sulphureted hydrogen.

Both ossa innominata were found loosened at their sacro-iliac articulations. The left acetabulum was fractured in such a manner, that the three bones which constitute it were sepa

rated at their original points of union. The posterior and superior border of the acetabulum was broken off and removed to a short distance, where it was retained by new ligamentous attachments; but its displacement had left such an opening, that the head of the femur must have been easily dislocated on the dorsum of the ilium; and this fully accounted for the prolonged shock perceived whilst the limb was being examined.

Remarks.—This case is interesting from the number of important injuries combined, and it is highly so, in regard to rupture of the bladder; in reference to which, the question may be asked, were these openings in the bladder produced at the time of the accident, or did they follow as a consequence? Taking into consideration the high state of inflammation of the bladder, and the active constitutional disturbance, following so soon after the injury; that rupture of the bladder generally accompanies fracture of the pelvis, and especially where there is displacement of the innominata, in addition, there can be scarcely a doubt that rupture of the bladder was a part of the injuries sustained at the time of the accident. Another important item connected with this case, is, the length of time the patient lived after the injury—a space of 32 days. In the very accurate statistics of rupture of the bladder (a collection of 78 cases), by Dr. Stephen Smith, formerly of this hospital, and published in the 6th vol. N. S. of this Journal, there is only one case that lived longer after the accident. That patient lived 42 days—the next longest time is 23 days. In those two cases, the post-mortem appearances were very similar to those described in the case here recorded.

ART. VI.—*Syncope from entrance of air into the Facial Vein.* By MOSES GUNN, M. D., Professor of Anatomy and Surgery in the University of Michigan.

THE substance of the following case was transmitted immediately after its occurrence, to the Chairman of the Committee on Surgery of the National Association; but no notice having been taken of it by that committee, and deeming it not entirely

devoid either of interest or novelty, I now seek to lay it before the profession through another channel.

The patient appeared at the college clinic with a small, hard, oblong tumor, lying under the base of the inferior maxilla, involving the facial vessels so as to require their division in its extirpation. Previous to commencing the operation, in accordance with my usual custom before making incisions in this region, I sought, by compression with my hand upon the lower portion of the neck, to ascertain the course of the external jugular vein, but was not able to detect the vessel. An incision was made parallel to the base of the jaw, and the tumor separated from its bed, except at a point near its posterior extremity where it involved the facial vessels. These were divided, the tumor detached, and its place occupied by a sponge, removing which, in order to secure the facial artery, I instantly noticed a movement in the open mouth of the facial vein, heard a bubbling sound, and my patient sank back in a state of syncope, from which he recovered with some difficulty by the ordinary means. The wound was immediately stopped on noticing the movement in the open mouth of the vein, and by means of a firm compress, hemorrhage and further entrance of air was sought to be prevented, and the wound allowed to heal by granulation.

This case is interesting from the fact that the accident arose from the entrance of air into a vein as small as the facial, and had it not been reinforced by some other, it would seem impossible for its division to be attended with such results. But it will be borne in mind, that the external jugular did not pass down the neck in its usual superficial course, but probably united with the facial, and emptied by a short thick trunk common to both into the internal jugular. The facial I undoubtedly divided at the point of junction. I have once met with just such a distribution of the veins upon the dead body.

ART. VII.—*Remarks on the Treatment of Typhoid Fever.* By H. N. BENNETT, M. D, Bethel, Ct.

THE treatment of typhoid fever has long been with me a problem of difficult solution, although one of the most fre-

quent diseases with which every New England practitioner has to contend. An early partisan of the opinion that the *typhus fever* of the Northeastern States, was identical with the disease described under so many different names by the French writers, I naturally inclined, in the complete absence of any thing like a specfiic treatment, and having in my mind the anatomical lesions which so constantly occur in the abdomen, to avoid every thing like perturbation either in the first or succeeding stages of this grave malady. Expectation has been for a series of years, *my* method, and though it may be an acknowledgment of ignorance, yet it has succeeded in the large proportion of cases, and I believe is far preferable to any plan which adopts as the basis of its operations, the excitation of any of the internal organs.

During the past eight months, this form of fever has prevailed to a considerable extent in this and the adjoining towns, and I have had in this time an opportunity of treating thirty well marked cases, beginning with the initiatory symptoms. These thirty cases have been treated upon an unique plan, and with such uniform success, not a single case having proved fatal, that I have determined to lay it before the medical public through the Journal, in order that others may be induced to give it a trial, and determine whether this success has depended upon the efficacy of the treatment, or upon the rare coincidence of such a succession of fortunate cases. This method consists simply in the continued repetition of minute doses of morphine in solution, at intervals of one, two, three, or four hours, according to the circumstances of the case. I dissolve one grain of the sulphate of morphine in 4 or 6 ounces of water, according to the age of the subject and the intensity of the symptoms, and commence by giving the patient a teaspoonful of this solution every two hours. In the first stage of the disease, when there is much pain in the head and limbs, jactitation, wakefulness, &c., the repetition of this dose for 24 or 48 hours, has almost uniformly succeeded in controlling these symptoms, and they have given way to a degree of quiet highly refreshing to the patient. The steady exhibition of the medicine in this manner, soon produces a tendency to protracted sleep, and it may be neces-

sary to abate the frequency of the dose, giving it every third or fourth hour only. After some days continuation of this treatment, it has been common to see the heat and dryness of the skin give way to a general perspiration more or less profuse, and affording much relief to the patient. This has occurred a number of times during the course of the disease, in some cases the first alleviation of the symptoms being followed by an exacerbation, which again yielded to the same favorable conditions. In other instances, the disease has seemed to yield its severity almost to the first decided impression made by the exhibition of the medicine. The following case (condensed from my notes) was most striking in this respect.

Nov. 25th. (1851).—Joseph Bradley, a farmer, of intemperate habits, has complained for ten days past of intense headache, pain in the back and limbs, loss of appetite, muscular debility, &c. He has taken some cathartic medicine, which operated freely, but produced no diarrhœa. At my first visit to day, I find him still complaining of severe occipital headache—has had slight epistaxis this morning—prostration; tongue smooth, red and dry through the middle; abdomen slightly tympanitic; pulse 90; eyes suffused; skin hot and dry; no appetite nor thirst. Prescription, one grain of morphine in 4 oz. water, a teaspoonful to be taken every two hours; sinapisms to the neck and feet; Indian gruel; mucilaginous drinks.

26th.—Epistaxis; intense pain in the head; pulse 90; tongue continues dry; no fœcal evacuations; intellect wandering through night; continue the sol. morph., and add Dov. powder 5 grs., calomel 2 grs. at bedtime.

28th.—Five or six alvine evacuations since last visit; tongue dry, brown and chapped; great restlessness; pulse same; no other alteration in the symptoms. Continue the sol. morph. every hour, with mucilages.

30th.—I find my patient apparently improved; has been in a constant and general perspiration since last evening; slept well through the night; headache less intense; tongue more moist; no alvine evacuations; pulse 86; abdomen slightly tympanitic.

This was the 16th day of his disease, and from this period the intensity of the symptoms was completely subdued, and although convalescence could not be said to be fairly established, yet a gradual amendment was perceptible from this time, and no marked exacerbation of the symptoms re-occurred.

Diarrhea has been a predominant symptom in a large majority of the thirty cases which I have mentioned, and although the treatment has by no means suppressed it, yet it has evidently exerted a controlling influence, rendering the discharges less frequent and perhaps less copious. In the case of a young lad 8 years of age, whose disease was protracted to five weeks, and who had a continual tendency to diarrhea during the whole period, this symptom was evidently controlled with great advantage to the patient by the steady exhibition of the morphine in the manner I have indicated. Its occasional suspension for a few hours, for the purpose of obtaining a subsidence of the narcotism produced by its continued administration, was uniformly followed by an increase of the quantity and frequency of the alvine evacuations, as well as of the tympanism of the abdomen, and of the frequency of the pulse.

The duration of the thirty cases treated in this manner, has varied from 16 to 45 days, and the degree of the gravity of the symptoms has been very different in individual cases, although in the aggregate there has been considerable uniformity. In those cases which were protracted to four, five, and six weeks, and in which delirium was a common symptom, I continued the treatment up to the period of commencing convalescence, and did not in a single instance observe any untoward symptoms which could be attributed to the protracted administration of the medicine. In no case have I seen any signs of that peculiar nausea which often follows upon the exhibition of opium in the ordinary manner, and I have attributed this exemption from so unpleasant a consequence, not only to the minuteness of the dose, but also to the degree of dilution to which I submit the morphine.

The only adjuvants to this treatment, which I have employed, have been the occasional exhibition of a few grains of

Dover's powder and calomel at night, in the earlier stages of the disease, before the morphine had produced a decided effect, together with now and then a laxative dose, as circumstances required at any stage of the disease.

Whether future trials of this simple method of treating typhoid fever, will justify me in adopting it exclusively, is yet to be determined; but its apparent success thus far, I think, fully warrants me in giving it a further trial.

ART. VIII.—*Adulterated Medicines in the Country.* By A. WILLARD, M. D., of Greene, New-York.

THE following remarks are the substance of a report made to the Chenango County Medical Society, in pursuance of a resolution adopted by the Society for the purpose of carrying out the request of the United States Medical Association, as expressed in a resolution offered by Dr. Huston, Chairman of the Committee on Spurious and Adulterated Drugs, and adopted by the Association at its meeting in May, 1850.

The Government of the United States has wisely appointed an officer, whose business it is to inspect all imported drugs and chemicals, and to permit none to be entered at the different custom-houses excepting such as are pure and unadulterated. This duty is undoubtedly performed with all the care and attention which the framers of the law contemplated; at least we are at liberty to suppose that such is the case; so that the importer and wholesale dealer are, in a great measure, protected from frauds in their purchases of *foreign* articles. But it does not necessarily follow that the retailer and the consumer are equally safe from imposition; nor is there any law to prevent abuses in the home manufacture of chemicals, or in the preparation of those compounds by the apothecary which are in constant and daily use by the physician.

Every medical practitioner in the country knows full well how often he is disappointed in the effects which he expects to obtain from the exhibition of certain remedies—remedies which, he has the best authority for believing, are to produce certain positive and unequivocal results—results for which he waits

anxiously, but too often waits in vain. His trials of an article which he purchases as perfectly pure, not unfrequently lead him into the firm belief of its inutility, or still worse, of its absolute injuriousness to his patient, while the article in its purity, if it could be thus procured, would be found to possess all the valuable properties ascribed to it.

We do not wish to make wholesale charges, but we cannot doubt the fact, that there is no traffic which opens so wide a door for fraud, imposition, and iniquity, as the trade in drugs, and the manufacture of chemicals and pharmaceutical compounds. And it is not alone in the more costly preparations of this sort that fraud and imposition exist, but even the cheapest are not only adulterated, but sometimes an article of the kind is found which contains not one particle of the substance it purports to be. For instance, we have now in our possession a specimen purchased for precipitated carbonate of iron, which was nicely bottled and labelled with what purported to be the manufacturer's name, which consists entirely of Spanish brown. Another article was purchased for litharge, which it is believed contained no particle of lead, but seemed to consist entirely of some yellow earthy substance, such as yellow ochre, or some other cheap material of the kind. Most practitioners in the country are in the habit of preparing their own tinct. muriatis feri. That which is purchased from the apothecary is so variable in its strength that it is not to be depended on; and, indeed, that which they prepare for themselves is little better, in consequence of the very great impurity of the precipitated carbonate which is generally used in its manufacture. We have seldom been able to dissolve more than one-half or two-thirds of the iron, and of course the preparation varies in strength in proportion to the amount of iron it contains.

If, however, a pure carbonate be formed, the acid will dissolve every particle of it, and the resulting tincture will be found to possess all the valuable properties which are expected to be found in it.

Sweet spirits of nitre is an article which it is extremely difficult to find in the country of equal and uniform strength. It is manufactured either by the chemist or the drug-seller (we do not exactly know which), of all sorts of strength to suit

purchasers, and hence it comes to us labelled with a multitude of F's, from a round half dozen or so, which are supposed to indicate the different degrees of strength, down to that which is not considered worthy of being dignified with any F at all. This last is the preparation which is most usually brought into the country, and it not unfrequently requires an individual of a most exquisite nicety of taste and smell to distinguish it from ordinary whiskey. Precisely the same remarks will apply to aqua ammonia. Perhaps there are scarcely two samples of this article which contain the same amount of ammoniacal gas, so that in ordering it for internal exhibition, the prescriber never knows the exact amount of the alkali he directs.

It would evidently be an improvement if both this and spirits of nitre could be prepared of uniform strength for internal use. Aqua ammonia is frequently required of greater strength for external application, so that there would seem to be a necessity for two preparations. But no such reason exists for the multitude of F's that are attached to the various samples of spirits of nitre; indeed we believe that no reason can be given for this, aside from the cupidity of the manufacturer.

Occasionally castor oil is found adulterated with some cheaper oil—perhaps lard oil. If thus adulterated the taste is not materially altered, perhaps it may be somewhat improved, but the activity of the remedy is very much diminished, so that it becomes almost impossible to apportion the dose in such a manner as to be at all certain of its effects. In an article so much used as a household remedy as this, this iniquitous adulteration is much to be regretted.

We have recently been shown a specimen of olive oil adulterated probably with lard oil. Its appearance was very fine, nicely bottled and labelled, and every way calculated to deceive the eye; but its impurity was readily detected by the taste which indicated pretty conclusively that the foreign oil was procured from half putrid materials.

The compounded spirits of sulphuric æther (Hoffman's Anodyne) is seldom found in the country. The spirit of sulphuric æther is sold for it, which contains not one particle of ætherial oil, the ingredient to which the former remedy owes its peculiar virtues.

The compounded spirits of lavender is a preparation which perhaps never comes to us in the shape in which it is directed to be made by the Dispensatories. The various writers on pharmacy tell us it is a delightful compound—an elegant preparation—a grateful cordial, but we, at least, have never been able to procure it in so delightful, elegant and grateful a form. On the contrary that which we have usually procured exhales any thing but the delightful and pleasant aroma of fresh lavender and rosemary. We are led to believe that it is now generally, if not always, made by dissolving the essential oils of lavender, rosemary and cloves in alcohol in very variable quantities, to suit the notions of the compounder, and coloring the mixture with red sanders. If fresh oils were used, this might be a very tolerable substitute for the officinal preparation, always providing the oils were pure. The oil of lavender ordinarily used by the apothecary is probably procured from the broad-leaved variety of the plant, instead of the narrow-leaved, which is more costly as well as more fragrant. The former variety smells pretty strongly of turpentine, and both are, not unfrequently, pretty largely adulterated with it, so that in the compound we are considering we get a most villainous essence of turpentine instead of lavender.

We frequently get Croton oil in the country which will not even produce redness of the skin. It is needless to say that some cheap oil is mixed with it.

It is perhaps useless for us to speak of the very extensive adulterations of those medicines which come to us in the form of powders. Their inefficiency is well known. Among these ipecac, rhubarb, and jalap are frequently so diluted by the addition of inert substances, that it is difficult to designate a proper dose, and many times, an amount is required that is extremely inconvenient to the patient, and not a little annoying to the prescriber.

We presume, that in the cities, with the aid of government examiners of drugs, colleges of pharmacy, pharmaceutical societies, and sundry other appliances, suited to keep the trade within the bounds of propriety, the sale of adulterated drugs is very much lessened; at least, we so understand from various sources; but we must be allowed to doubt whether the law

with all its terrors, aided by all the appliances aforesaid, has made men any more honest than they were before it went into effect, unless it be upon compulsion. That there are more bad drugs in the country than heretofore is perhaps not the fact, but that the quantity is materially lessened, is very much doubted. The reason, or at least one reason, for this is, that in the country but very few in proportion to the whole number that sell drugs, know any thing at all about the trade; many not being able, indeed, to distinguish one drug from another except by the label on the package. We have known Peruvian bark sold for rhubarb, uva ursi for buchu, and Virginia snake root for pink root. The object of the country trader is very much the same as that of the merchant princes, that is, to make money, and whatever purchases they make are made with a single eye to the expected profits, and whatever will afford a profit is considered a legitimate article for traffic. Hence a country store is a sort of "*omnium gatherum*," the contents of which would put entirely in the shade the multifarious catalogue of the famous Mr. Caleb Quotem.

As traders most usually purchase drugs for the sake of the profits their sales will yield, the quality is the last matter inquired about,—the cost is the principal thing, and whether they will yield a fair per centage, is the question, and there are plenty of very accommodating gentlemen to be found in the cities, who are not only willing but anxious to sell drugs at almost any price the purchaser may require.

Hence it will be seen that the country is flooded with impure and adulterated articles, in consequence of ignorance of the quality on the one hand, and insatiable cupidity and recklessness of human life on the other.

ART. IX.—*Upon the Diseases of the Isthmus of Panama.* By JOHN A. LIDELL, M. D., of New-York.

IN an article published in the last number of this Journal, some general views were presented concerning the climate and the diseases, especially of Europeans and Americans, at Navy Bay, Chagres, and in the valley of the Chagres river. The morbific influences of malaria or marsh miasmata, of the high range of atmospheric temperature,

moisture, etc., were stated at some length, and in a general manner. In the present paper we propose to continue the same subject, by giving a special description of some of the diseased states of the human body, generated by these morbific agents; using for this purpose, observations made at the above-mentioned places, during the dry and the commencement of the rainy season of 1851.

I.—OF THE CLIMATE FEVER.

This is the most common disorder of that country. Of 382 patients treated in the hospital at Buyo Soldado on the Rio Chagres, 250 or nearly two-thirds had the climate fever. Most strangers are attacked by it in the course of a few weeks after their arrival. At Chagres and Panama, it has acquired, among foreigners, the surnames of those places respectively. This disease is paroxysmal in character, and identical in many of its features with the remittent fever, so common during the summer and autumnal months in most parts of the United States.

Its symptoms vary much, according to the pre-existing pathological states of the organism, the severity of the seizure, and for reasons that are not understood. The symptoms which usually mark its accession are languor, lassitude, weariness, yawning and stretching, aching pain in the bones, and chilliness, followed by heat and dryness of the skin, acceleration of the pulse, general diminution of the secretions, flushed countenance and headache. In some cases, the paroxysm is ushered in with a well marked rigor, but in other cases, even chilliness is wanting, and in still another class of patients, the chilliness alternates with flushings of heat. Pain in the head is sometimes present in the forming stage, and commonly, but not always, accompanies the hot stage. The patients generally complain of, and exhibit by their actions, much debility, both during the continuance of the disease, and for a variable length of time after it has passed away. At the expiration of from twelve to sixteen or eighteen hours, according to the severity of the attack, the intensity of the febrile symptoms begins to be lessened, the skin becomes cooler, the pulse less frequent, and the patient says he feels more comfortable; in short a decided remission occurs. At the end of about twenty-four hours from the commencement of the paroxysm, the intensity of the febrile symptoms is again increased, an exacerbation takes place, except such a result has been prevented by timely medication; and in general, without such timely interference, the severity

of each succeeding exacerbation will constantly be increased, a result which I witnessed several times in persons who could not obtain medical assistance till after the lapse of several days, or would not apply for medical assistance, till the severity of their sufferings compelled them to do so. We must next mention a class of patients, in whom the attack commences without a chill, or even chilliness, and terminates at the end of twelve or fourteen hours, in a well-marked intermission, profuse perspiration being present. These cases seem to be a sort of intermittent fever, without the cold stage, and are not unfrequent in occurrence. We also sometimes see, during the height of an exacerbation, transient and partial perspirations alternating with hot flushings of the skin. We now proceed to notice a very important class of patients, in whom no well-marked remission can be detected till after the lapse of three or four days. But this result must be considered as having been occasioned by a complication or lesion of some tissue or organ, (which may be either accidental or otherwise,) accompanying the malarious fever, and essentially modifying its symptoms, progress, and treatment. Thus, irritation of the stomach and intestines, congestions and inflammations of these and other organs, are known to produce such a result, and the fevers accompanying them, whether sympathetic or idiopathic, are apt to be more or less persistent in character.

From this point of view, the complications of malarious fever are seen in their true light; and their diagnosis and treatment, seem to fitly illustrate the superiority of the sound pathologist over the empirical practitioner.

In this connection it may be well to notice the most important complications with the climate fever, and the symptoms peculiar to each of them. The *bilious* is deserving of mention before all others, both on account of its severity and the frequency of its occurrence. When this complication is present, the patient has in addition to symptoms already narrated, nausea and more or less copious vomiting of bilious matter, bitter in taste, and greenish yellow in color. The bilious vomiting may commence at the outset of the attack, or occur at any moment afterwards. His tongue is usually covered more or less thickly with a yellowish coat, and its papillæ may be large and distinct. He may also have more or less tenderness on firm pressure at the epigastrium, and right hypocondrium. In some cases, even at an early period, the conjunctivæ and the whole surface of the body exhibit a jaundiced hue, and bile can be detected in the urine. By these symptoms we recognize bilious remittent fever. Another

complication of frequent occurrence is the *gastric*, the symptoms of which in a well marked case, are nausea and distress in the stomach, tenderness at the epigastrium under pressure, vomiting, intolerable thirst, and if drinks be swallowed copiously, they are directly vomited up again. There is retching, and if the stomach is nearly empty, a little bile may be thrown off. The tongue is usually more or less coated with a whitish fur, and it may be reddish about the tip and edges.

Again, another rather frequent complication which deserves a notice at our hands, is the *enteric*. When this is present, the patient has more or less distress in the belly, he sometimes complains of a constant burning pain in the abdomen, he has diarrhea of greater or less urgency; the discharges are thin, consisting of mucus, or muco-bilious matter mixed with fæces, in varying proportions. The stools are often acrid and exhibit a bright yellow color. There is also more or less tenderness of the belly under pressure, which is often most marked in the track of the small intestines.

These superadded to the usual symptoms of malarious fever, are, according to my observations, the signs by which each of the three complications may, for the most part, be recognized.

We have also to mention that two of these complications are often co-existent in the same case. For example, the *hepatic* or *bilious* is almost always accompanied by the *gastric;* the *enteric* is sometimes associated with the *gastric*, and occasionally all three of them are present in the same subject.

The climate fever is usually associated with one or more of these complications. The rationale of this was sufficiently explained in a former article, and it does not seem to be necessary to repeat it here. But such is not invariably the case; for I both suffered in my own person, and saw others have the fever, unattended by marked disturbance of the hepatic function, unattended by marked irritability of the stomach and intestines. However, we must not be understood to say that, in such cases, the bile is perfectly normal in quantity and quality, or that the function of digestion is performed as well as in health, but that the disturbance of the liver, stomach, and intestines, is not so great as to deserve the name of a complication; for, in such cases, those organs are only exhibiting the effects of malarious poisoning, in common with every other part of the body.

Upon the pathological anatomy of the climate fever, and its so termed complications, we have not much to say. Observations upon such a subject, unless they are carefully drawn from numerous and skilful dissections, are more or less hypothetical in their nature, and

are more or less calculated to mislead. However, a strict interpretation of the vital phenomena, according to what is now known concerning the pathological anatomy of the mucous membrane of the alimentary canal, renders it probable that the *gastric* and *enteric* complications, in most cases, consist essentially of a hyperæmia (congestion) or a catarrhal inflammation of the gastric and enteric mucous membrane, of varying intensity. This may, at first, amount only to catarrhal irritation (simple catarrh), and pass afterwards into the higher grades of inflammatory action. It may result from mechanical or chemical irritation of the gastro-enteric mucous membrane, affected by the acridity, excessive quantity, or indurated consistence of the intestinal contents; or it may be developed in consequence of congestion or venous stasis in the portal system. It either attacks the mucous membrane uniformly, or is developed mainly in the villi and follices. It may run an acute course, or degenerate into a chronic stage. Besides these there is probably another abnormal condition of the gastro-intestinal mucous membrane, which is sometimes co-existent with malarious fever. We refer to the so-called non-inflammatory softenings. They would be found only in subjects suffering from a general cachexia and atrophy, or who had experienced frequently repeated attacks of the fever.

Under the general term bilious complication of the climate fever, several abnormal states of the liver are probably embraced, which resemble each other only in the disturbance of the biliary function they occasion, but are widely different in their essential character. Among these we may mention, first, hyperæmia or congestive turgor, including both passive hyperæmia, dependent upon torpor in the portal vascular system, and active hyperæmia, resulting from idiopathic or consensual irritation; second, sub-acute inflammation of the hepatic parenchyma; third, catarrhal irritation or inflammation of the mucous membrane of the biliary passages; and fourth, pre-existing abnormal states of the liver, such as the fatty degeneration, and the nutmeg liver, particularly that variety of it which consists of hypertrophy of the white or so-called secreting substance, with enlargement of the capillaries of the biliary cunaliculi, resulting from excessive secretion of bile and stasis of the secretion, and accompanied by hyperæmia of the portal bloodvessels. The inflammation of the biliary mucous membrane, closely resembles that of the gastro-enteric mucous membrane, and is often co-existent with it.

Treatment.—The indications to be followed in the treatment of climate fever are threefold; first, to moderate the febrile excitement,

and produce a remission as soon as possible; second, to prevent complications when they do not exist, and to remove them when they are present; and third, to prevent the recurrence of the paroxysms.

The first indication is best accomplished by quiet; the patient should remain in bed, which almost always he is glad to do on account of feeling much debilitated, by the administration, in suitable quantities, of the refrigerant drinks, such as cold water, lemonade, tamarind water, cream of tartar water, and liquor potassæ citratis—by cool or tepid spongings of the surface of the body, and by the administration of a gentle laxative. The last class of remedies always answer a useful purpose. The contents of the intestinal canal, under the circumstances supposed, are generally more or less acrid in quality, and by their removal an abiding source of irritation is destroyed, and in some cases, a complication is prevented. The laxatives which are mildest and at the same time effectual, are the best. We used castor oil, Seidlitz powders, magnesia, sulphur, potassa, bitart., magnesia calcinat., pulv. rhei et magnes., but generally gave the preference to castor oil. When the secretions were very scanty we usually administered five, ten, or even fifteen grains of blue mass, and directed it to be followed in a few hours with a dose of castor oil or a saline aperient. In case a mercurial was administered, acidulated drinks were prohibited. A weak infusion of camomile, taken cold, constituted a grateful drink for many patients. The neutral mixture, liquor potass. citrat., by slaking thirst, promoting diuresis and diaphoresis, seemed to be a useful remedy. At the same time all food was interdicted, or only barley water, rice water, thin arrow-root, and thin gruel were allowed. In this simple manner the treatment of an uncomplicated case of climate fever was conducted till a remission occurred, which was denoted, as already mentioned, by a partial subsidence of the febrile symptoms. The time had then arrived for the employment of another class of remedial agents, for the purpose of preventing exacerbation and arresting the febrile movement, the antiperiodics. Of these the best is the *sulphate of quinine*. I made many observations for the purpose of determining the average quantity of this medicine required to arrest the paroxysms of malarious fever on the Isthmus, and found it to be fifteen grains. The usual method of administering it was as follows: five grains in substance, mixed with a little syrup or mucilage, immediately on the occurrence of the remission; five grains about the middle of the same period; and another five grains about one hour before the expected recurrence of the exacerbation. When the patient could not take quinine

in substance, we commonly gave a pill containing two grains of the remedy every hour, commencing with the remission, and continuing till the time for the exacerbation had passed by and the febrile symptoms had given place to profuse perspiration. In this way we almost always arrested the simple climate fever without difficulty, especially when proper preparatory treatment had been employed.

Arsenic, as an antiperiodic, received but a limited trial at our hands. I administered to myself Fowler's solution for a short time, but was forced to suspend it, on account of irritation in the gastro-enteric mucous membrane. And speaking in general terms, the irritable state of the abdominal mucous membrane in patients on the Isthmus, restricts its use to very narrow limits. Besides the effects of arsenic as an antiperiodic are not speedy enough to adapt it to the treatment of remittent fever.

We have thus briefly sketched the treatment of simple or uncomplicated climate fever. Except two or three points, *opium* is a remedy which seems to possess the power of abbreviating the hot stage, but the propriety of administering it for that purpose is more than doubtful in many cases, because it diminishes too much the secretions of the internal organs. Patients often have, during the height of the exacerbation, an intolerable headache. This is most easily relieved by the local use of cold water or evaporating lotions. During convalescence, patients are often troubled with profuse perspiration. This is for the most part easily remedied, by administering about one drachm of the acidulated solution of quinine three times a-day.

We must next describe the treatment of the complications, the symptoms of which have already been given. For the gastric we used the following:—If there was much tenderness at the epigastrium under pressure, two or three ounces of blood were taken with cups; if the tenderness was slight, a sinapism was applied, and both were usually followed with either hot fomentations or a warm poultice, applied over the affected part, and kept there till the tenderness had nearly disappeared. To control the vomiting and retching, we used effervescing draughts, liquor calcis, with mucilage, the recumbent posture prohibiting all drinks as long as necessary. Pounded ice would have been a useful remedy, but we had none. Hydrocyanic acid was also sometimes employed. After the vomiting ceased, we administered the neutral mixture with mucilage, applying, at the same time, the treatment proper for malarious fever, but avoiding as much as possible the internal administration of irritants.

The bilious complication was treated as follows:—If there was well-marked tenderness in the right hypocondrium, cupping was employed to the extent of four or six ounces, and a large warm poultice was applied over the same region and kept there for some time. The bilious vomiting was at first encouraged by drinking freely of warm water, after which it sometimes declined spontaneously, or, in most cases, was readily controlled by remedies already mentioned. As soon as it could be retained on the stomach, a saline cathartic (the salts of potassa were best) was administered for the purpose of producing diuresis and large watery evacuations from the bowels, whereby we hoped to diminish the volume of the portal circulation without too great a sacrifice of the patient's strength. If the hepatic tenderness remained after cupping and faithful poulticing, a large blister was applied directly over the affected part. In some cases, where vomiting was a persistent symptom, we have seen large doses of calomel (from 20 to 30 grains) administered with apparent advantage. To quiet the patient at night, and give him needful repose, his body and limbs were sponged with tepid water, and he took a suitable dose of morphia.

For the enteric complication we gave the following treatment:—If there was much abdominal tenderness, a few ounces of blood were abstracted locally with cups, after which the belly was poulticed. If the tenderness was slight, instead of cups a sinapism was applied, and followed also by a warm poultice. To effect the expulsion of the acrid contents of the intestinal canal, a mild laxative was given, such as five or ten grains of blue mass, followed by calcined magnesia, or castor oil, combined with a little laudanum, or sol. sulph. morphiæ, to prevent griping. Mucilage was administered internally; and none but the blandest kinds of food, such as arrow-root, well prepared farina, and rice water, were allowed. Avoiding carefully whatever might increase the local disorder, and applying cautiously the principles already laid down for the treatment of paroxysmal fever, we generally had the satisfaction of seeing our patients convalesce rapidly.

Of Emetics.—Dr. Mackintosh, in his Practice of Physic, says—"Emetics have been often extolled, but I believe very experienced tropical physicians will agree with me, in cautioning young practitioners against their indiscriminate employment. Irritability of the stomach is one of the most frequent and troublesome symptoms: and once excited, it is always difficult, and in many cases impossible, to restrain it. I have seen emetics exhibited, and the vomiting has

continued till death in spite of every remedy." This advice, against the *indiscriminate* employment of emetics in the treatment of tropical fevers is certainly judicious. But still there is a class of cases in which they can be used with safety and with manifest advantage. There are patients whose stomachs are loaded with food at the outset of the attack, or with acrid secretions, without tenderness at the epigastrium. A gentle emetic of ipecacuanha, with diluent drinks, administered to them, does good by removing speedily a powerful source of irritation, in this manner occasionally even preventing the occurrence of a severe gastric complication. But if no such reason for prescribing an emetic exists, the irritation occasioned by its presence in the stomach may be productive of much harm,—a state of catarrhal irritation may be aggravated into positive inflammation, and an inflammatory condition of the gastric mucous membrane may be intensified. Neither must it always be taken for granted, that, because the patient has nausea and vomiting, the stomach contains acrid substances, for in severe cases of the gastric complication these symptoms are present, though the organ is nearly empty.

Of Mercurials.—Calomel and blue mass have been and are now used so extensively, and with such apparent advantage in the treatment of tropical fevers, that at first sight it may seem an act of temerity in us to offer any strictures concerning their use. We have, however, had occasion to notice on the Isthmus of Panama, that the people generally are much more susceptible to mercurial influence than the inhabitants of temperate climates; that they are salivated more speedily, and with smaller quantities of the drug. We also observed that fever patients generally, who had been salivated either accidentally or otherwise, while under treatment, could not be discharged from hospital so soon by several days, as those who had not been salivated; that their convalescence was more protracted, and their recovery seemed to be less complete. Our experience is corroborated by that of other observers. While, therefore, we readily admit the great value of the mercurial preparations, as antiphlogistics, alteratives and cholagogues, it is our duty to declare that some caution should be used even in administering them to persons suffering from tropical diseases; and that according to our experience, thirty grains of calomel can seldom be taken with impunity by a patient having simple climate fever.

The principal cautions to be observed are the following:

1st. Never to administer mercurials except to accomplish a specific purpose.

2d. To use the mildest form which will accomplish that purpose, and

3d. To use the smallest quantity necessary to produce the desired effect; and

4th. When mercury has been administered as an alterative, or a cholagogue, to always follow it in a short time with a laxative.

By attention to these rules, all the advantages to be derived from mercurials will be obtained, and many of their unpleasant consequences will be avoided.

II.—Of Congestive Fever.

This is not a disease sui generis, but one of the forms of malarious fever. Strictly speaking, it should have been described as climate fever with the congestive complication. But inasmuch as the object we have in view is to present a clear, though brief, description rather, than an accurate terminology of the diseases of the Isthmus, we shall not in this instance depart from the nomenclature in common use. The term *Congestive* has been applied to this form of malarious fever, because its most prominent symptoms are produced for the most part by a sudden retrocession of the blood from the external surface of the body, and a corresponding increase in the quantity of the circulating fluid, in the internal organs (Congestion). Greater or less abnormities in the distribution of the blood among the various parts of the body, are present in every paroxysm of paludal fever, but the term *congestive* should be applied only to cases in which the symptoms are well marked or even alarming in character.

These symptoms vary much according to the seat, extent and intensity of the congestion. The general symptoms (i. e. those which are present in every well-marked case) are the following:—the attack is sudden, the surface of the body speedily becomes cold, shrunken, and bedewed with moisture; the countenance is pinched and pale or livid; the eyes are sunken, the voice is hollow and weak; in many cases the patient can scarcely speak louder than a whisper; the breath is cold, the pulse feeble, sometimes it is scarcely perceptible at the wrist, and the patient if conscious complains of general and extreme debility. If the lungs are the suffering organs, in addition to the symptoms just mentioned, the respirations are frequent, short and anxious, and the patient complains of dyspnœa, orthopnœa, or even says he can scarcely breathe. If the abdominal viscera are the seat of the principal congestion, the patient complains of a feeling of

excessive fulness, or even pain, in the belly, and his countenance in many cases presents a dusky hue. Copious vomiting and purging of bilious matter are often present; also convulsive movements of the extremities, or cramps occasioned by eccentric irritation, located probably in some cases in the alimentary canal. If the brain is the organ invaded, the symptoms are stupor, or even coma with stertorous breathing, an infrequent, slow and weak pulse, and contracted or dilated pupils. Again, if the spinal column is deeply involved in the congestion, the patient has a feeling of great uneasiness in the back, or even pain, and, in many cases, cramps, which are commonly most marked in the lower extremities. This we witnessed several times.

Diagnosis.—The only disorder for which a well-marked case of the congestive form of malarious fever might be mistaken is Asiatic cholera. The collapsed appearance of the patient, the cold, clammy and shrunken or washerwoman appearance of the skin, the feeble pulse, the weak, husky voice, and the distressing cramps, vividly recall the last-mentioned disease to the mind of the observer. The differential diagnosis is founded on the following points. 1st. In congestive fever, the evacuations which have been termed characteristic of cholera are invariably absent. The patient may vomit, but the matter ejected is bilious, and does not resemble "the rice-water." At the same time he may have frequent and thin stools, but instead of the choleric evacuations, they are generally bilious or muco-bilious in character. 2d. The type of the prevailing diseases assists in framing a diagnosis. If the severer forms of paludal fever are common, and not a single case of cholera has been seen for a long time, the probability is very strong that the patient has congestive fever; and 3d. The effect of remedial agents should not be overlooked. If this should answer no other purpose, it may serve in some degree to verify the diagnosis.

Treatment.—The first indication is to prevent further depression, and to facilitate or hasten reaction. This we sought to accomplish by external stimulation. We directed bottles of hot water or hot stones wrapped in cloths to be placed in the axillæ and about other parts of the body; the extremities to be diligently rubbed with oleum terebinth., and a suitable increase in the quantity of the patient's bedding. We also caused large sinapisms to be applied to the patient's body, and kept there till reaction had fairly commenced, shifting them from one spot to another as often as the pain occasioned by their use should seem to require. In some cases we directed dry cups to be applied directly over the organs most intensely congested. We did not administer any of the diffusible stimulants internally

except in a few hopeless cases, cases which were rendered hopeless by the feeble condition of the patient at the time of the attack, or by important pre-existing pathological lesions. If the congestion was located principally in the abdominal viscera, a purgative dose of calomel (20 grains and upwards) was administered. If distressing cramps were present, anodynes (opium and morphine) were prescribed for the purpose of mitigating the patient's sufferings, till the cause which had produced them could be removed. To check the vomiting, and to allay the intolerable thirst which was sometimes exhibited, we gave effervescing draughts, allowing the patients at the same time to drink fluids but sparingly. Pounded ice would have been very useful for the same purpose.

By the diligent use of the various means just mentioned, reaction was generally established in the course of a few hours, after which the febrile excitement always ran very high. To diminish the excessive febrile reaction is therefore the second indication to be followed in the treatment of congestive fever. This we endeavored to accomplish by the removal of all the irritants which had been used so freely during the cold stage, by enjoining rest and quiet, by tepid spongings of the body, and by the administration of refrigerant drinks. When the febrile movement seemed to be uncontrollable by other means, we have seen patients wrapped in wet sheets with speedy and well-marked benefit. This procedure is effected in the following manner: a sheet wet with cold water is spread over a mattress, and upon this the patient is laid, and the free edges of the sheet are turned over his naked body. Another wet sheet is then placed or spread upon the patient and its free edges are tucked under him. Outside of all, two or three woollen blankets are placed. In this manner the patient is completely enclosed, except his mouth and face, in a watery envelope. The procedure was generally grateful to the patient.

Thus we were generally able to obtain a remission within twenty-four hours from the attack, when the time had arrived to fulfil the third indication, or to prevent the occurrence of another paroxysm. This was accomplished by the administration of quinine in large doses, (from 10 to 20 grains,) commencing with the remission and repeating them at short intervals till the constitutional effects of the remedy, ringing in the ears, partial deafness, or blindness, etc., were produced. By such prompt and liberal use of this antiperiodic remedial agent, a recurrence of the paroxysm was invariably prevented. In regard to the administration of quinine during the

hot stage, we cannot speak in terms of unqualified praise, for we several times saw large doses given under these circumstances, with any thing but relief to the patient.

We have yet to notice the treatment of certain sequelæ or results of the morbid process under consideration. After the paroxysms have been arrested, the organs most deeply involved during the cold stage are apt to retain a congested condition. This we endeavored to remedy mainly by dry cupping and counter-irritation. For such lingering congestion of the brain, we applied blisters to the nape of the neck and to the inside of the thighs, dry cups to the temples, with cold applications to the head and the use of purgatives, if the patient was not too weak, or his gastro-enteric mucous membrane too irritable to bear them. For the relief of chronic congestion of the abdominal viscera occurring in this manner, we employed dry cuppings and large blisters applied directly over the congested organs, with manifest advantage. At this stage of the treatment, we did not meet with a single case in which the general or local abstraction of blood seemed to be necessary. In many cases even local blood-letting was not advisable, on account of the excessive debility of the patient. Some caution is necessary in the use of blisters upon the Isthmus of Panama. They should not be allowed to remain on too long, because the sores thus produced are sometimes extremely difficult to heal. Blisters should be applied only till their full *rubefacient effect* has been produced, and then the cuticle should be raised by a warm poultice. They should also be dressed frequently and carefully, because all of them, and more particularly those on the back of the neck, are liable to become "*maggoty.*"

An idea of the relative frequency of *congestive fever* can be found from the hospital record at Buyo Soldado, already referred to. Of *three hundred* and *eighty-two* patients, *twenty-three* or rather more than one seventeenth had congestive fever. This disorder was most rife during the middle and latter part of the dry season, according to our observations. Many of the subjects attacked by it were young and robust, while others had been enfeebled by recent sickness. We noticed a proclivity to it among patients convalescent from dysentery, and these likewise were by far the worst cases.

III.—Of Climate Fever in the Typhoid Stage.

This occurred for the most part in persons who were enfeebled by previous attacks of fever, or who had injudiciously administered

to themselves *irritating purgatives*, and especially *alcoholic stimulants*, either for the gratification of a morbid appetite, or with a view to relieve themselves from the debility which both accompanies and follows an attack of the fever. Old drinkers seemed to be much more liable to it than temperate people. An attack of malarious fever with the gastro-enteric complication occurring in an intemperate subject, exhibited a tendency to run into it, especially if judicious treatment was not employed.

Symptoms.—The patient has generally been sick several days, and may be more or less emaciated, his eyes and countenance exhibit a vacant expression, his tongue is either red or brown and partially or completely dry, he has low muttering delirium and sleeplessness, a dry hot skin, a frequent and more or less feeble pulse, abdominal tenderness, muscular tremors, great debility, diarrhea with thin and small stools, consisting principally of muco-bilious matter often bright yellow in color and sometimes tinged with blood, abdominal pain and more or less tympanites. If the case progresses from bad to worse, the patient gets sordes on the lips and teeth, subsultus tendinum, he slides down towards the foot of the bed, passes his urine and fæces unconsciously, and finally coma and death terminate the scene.

Diagnosis.—This disorder is readily distinguished from typhus, by attention to the history of the case, and especially by the absence during the first stage of the nervous symptoms which always accompany the accession of the latter disease.

Pathology.—In almost all the cases which came under our observation, there seemed to be an inflammatory action of variable intensity in the mucous membrame of the small intestines, superadded to malarious fever. In many cases the patient had suffered from a sort of muco-enteritis for a longer or shorter space of time previous to the accession of malarious fever. Badly managed cases of climate fever with the gastro-enteric complication were apt to bring about a typhoid state of the economy, or to assume a typhoid aspect. The reason of this is not difficult to be understood.

Treatment.—We endeavored to effect the cure of the local lesion at the same time avoiding whatever might diminish the patient's strength. We sought to accomplish this principally by the application of poultices and counter-irritants to the abdomen. Sinapisms often repeated, and blisters were used with manifest advantage. Warm poultices containing a liberal quantity of ol. terebinth., kept on the abdomen for some time, seemed to do good in some bad cases

that came under our observation. At the same time we administered internally mucilage gummi acaciæ, combined with an alkali such as the carbonate or bicarbonate of soda, if the stools were bright yellow in color or acrid in quality, which was nearly always the case. If the biliary secretion seemed deficient, we generally gave a few grains of blue mass, except the remedy was manifestly contraindicated. To produce sleep at night we resorted to tepid spongings of the body, bathing the temples and head, and the internal use of morphine or Dover's powder. Larger or even full doses of these narcotics were rarely required. We also used them in small doses with benefit, for the purpose of diminishing the quantity of the evacuations when excessive. At the same time we endeavored to support the patient's strength by a diet as bland as possible, consisting principally of arrow-root carefully prepared, with the addition, in some cases, of chicken broth. Owing to the poor quality of the beef on the Isthmus, we could not obtain beef-tea suitable for our patients.

Under this simple plan of treatment, marked improvement generally took place. The tongue became moist, the skin cooler, the pulse less frequent, the intellect clearer, the secretions more abundant, and the belly less swelled and tender.

As soon as a well-marked remission occurred, we usually administered quinine freely for the purpose of arresting the paroxysmal fever, combining the antiperiodic agent with a little Dover's powder or powdered opium, if the bowels continued to be very loose or irritable.

The convalescence was generally protracted, and during its continuance, it was necessary for the patient to be very cautious with regard to both the quantity and quality of his diet. Irritating kinds of food taken too soon or in too free a quantity, were exceedingly apt to occasion a relapse, or to produce a troublesome diarrhea. Indeed a disposition to looseness of the bowels remained in some cases for a considerable length of time after recovery.

Entertaining the views concerning the pathology of the typhoid stage of the climate fever which have already been mentioned, we did not see the propriety of administering alcoholic stimulants, in a single case. They seemed to us likely to add fuel to the flames already kindled, and therefore much more likely to injure, than to benefit the patient. Without their use, we have seen apparently most desperate cases recover under the simple plan of treatment just described.

IV. OF INTERMITTENT FEVER.

This disorder does not claim a lengthy notice in this connection. Except the remittent, it was the most common form of fever among American and Europeans on the Isthmus, according to our observations. Its most common types were the quotidian and tertian, but the quartan was by no means infrequent. We also saw a considerable number of cases in which the double tertian, and a smaller number in which the double quartan type was present. Besides these, many cases came under our notice in which the cold stage was either entirely absent or but partially developed, cases in which the hot and sweating stages alone were distinctly exhibited. This form of intermittent fever seemed to be the connecting link between fever and ague and remittent fever, and on this account it is again mentioned in this place.

We also observed that the paroxysms, after having been arrested, showed a strong tendency to return on the seventh, fourteenth, and twenty-first days after such arrest, and we turned this fact to a practical account, by supplying our patients with quinine, to be taken for the purpose of preventing such a recurrence of the paroxysms. In some cases the chills returned at irregular intervals, which was probably occasioned by accidental circumstances. These remarks are almost equally applicable to the recurrence of the remittent form of fever on the Isthmus.

In the treatment, we made a liberal use of laxatives and quinine. Purgatives, particularly irritating purgatives, were seldom administered by us. They seemed to be in nowise necessary, and in some cases might be productive of much injury.

We have stated that the results of the treatment of the diseases of the Isthmus of Panama, were favorable as far as our observations extended. What were those results? every reader will ask. The hospital record, to which we have so frequently referred, affords a satisfactory answer.

Of the 382 patients, 8 died of the following diseases, viz:

Tuberculosis of the Lungs and Climate Fever,	1
Climate Fever and Delirium Tremens,	1
Climate Fever and Enteritis,	2
Debility consequent upon Congestive Fever,	0
Erysipelas and Dysentery,	1
Chronic Dysentery and Splenitis,	1
Congestive Fever, Enteritis, and Dysentery,	1
Congestive Fever occurring during convalescence,	0
From Dysentery,	1
Total,	8

In the preceding pages we have not endeavored to present a systematic treatise upon the fevers of the Isthmus of Panama, but to record, in an intelligible manner, some of the results of personal observation in a new and extensive field.

The length to which this paper has already been extended, makes it necessary to reserve our account of Dysentery, Diarrhea, Hypertrophy of the Spleen, etc., for a future article.

ART. X.—*A Review of "Remarks and Recommendations on the Professional Education of Dentists*, by JOHN TRENOR, M. D., Dentist of New-York." By AMOS WESTCOTT, M. D., Professor of Theory and Practice in the "New-York College of Dental Surgery," Syracuse, N. Y.

THE above is the title of a paper recently published in the "New-York Journal of Medicine," and which subsequently appeared in pamphlet form.

From the high reputation which the author has long enjoyed as a professional man, and from his present position as a dental professor in one of our first Medical Colleges,* it is to be presumed that this article will not only be read by both the medical and dental professions, but that its teachings will thus be made to exert a marked influence in creating or fixing public sentiment upon the important subject discussed.

It is for this reason mainly, that, differing as we do in many particulars, with the author, we have felt that a review was called for, and it constitutes our main reason for engaging in a discussion from which we have hitherto stood aloof. The author of the article in question, declares it to be his object, "to show that in the practice of dentistry, a thorough knowledge of medicine and surgery is absolutely essential, to enable the practitioner clearly to understand, and successfully to treat, the cases which are constantly coming under his care." "That this may be more fully demonstrated and clearly understood," he continues, "it is proposed to treat, *first*, of medical dentistry; *secondly*, of surgical dentistry; *thirdly*, of mechanical dentistry; and *fourthly*, of that course of professional education, by

---

[* This remark, we presume, is based upon a report which has appeared in at least one of the Medical Journals of this City, that in the College of Physicians and Surgeons a chair of Dental Surgery has been created, and Dr. Trenor appointed to the same. We have been assured from a reliable source that this step has not yet been taken.—*Ed. N. Y. Jour. Med.*]

which these several branches can be best acquired and combined, which, with some remarks upon the mode in which this is now endeavored to be attained, will close this communication."

Now had the author of this article adhered to his original proposition—that of showing the necessity of a knowledge of medical science to the judicious practice of dental surgery, or had his "remarks" upon dental education, been legitimate deductions, or conclusions, drawn from his previous argument, we should by no means have taken issue with him.

The proposition that dentists should be well versed, at least, in all the elementary branches of general medical science, of course including the principles of surgery, is one for which we have been for many years a warm advocate; and Dr. T. will find, if he will take the pains to look through the "American Journal of Dental Science," several hundred pages devoted mainly to this subject, written by us, in which we have not only endeavored to show the importance of such a preliminary education, but also to arouse the attention of our profession to this subject. But after carefully examining his article, we can see no more connection between his original proposition, or his argument upon it, and his "remarks upon dental education," than between a *long* and friendly letter and its pungent postscript, containing a sharp dun—the former only serving as a menstruum, in which the author attempts to conceal and administer the latter.

Before proceeding to review these doctrines and "remarks" in detail, we shall first present a brief synopsis of his whole argument, and of his still more extraordinary deductions, that the reader may be enabled to see at a glance, the character of the paper under consideration, and, as a consequence, the fitness or unfitness of *our* "remarks" in reply.

If the arguments and "cases" of our author under the first subdivision—that of medical dentistry, prove any thing, they show—

1st.—That a full and complete medical education is necessary to qualify the dentist for the proper discharge of his duties as a dental surgeon.

2d.—That physicians educated in the ordinary way are not qualified to practise nor advise correctly as dental surgeons; and

3d.—That our medical schools, as now conducted, are incapable of imparting the proper and necessary information.

These conclusions are not mere deductions from the views he presents, but rest upon his positive assertion.

A very similar suit of conclusions are arrived at by Dr. T., in respect to the study of surgery, and the fitness of this class of doctors to practise dentistry.

The *third* subdivision of Dr. T.'s subject is mechanical dentistry. This department he passes over somewhat lightly; making its importance altogether secondary—assuring the student "that the path" to excellence in this department, "though with many deviations, seldom passes beyond certain bounds, all the peculiarities of which are so frequently met with, that a few years' experience makes him, *necessarily*, familiar with them."

Dr. T.'s *fourthly* is made up, principally, of "remarks on dental education," which remarks are *offered* as deductions from the "foregoing" remarks under the other heads; but as we have already said, they far more resemble a postscript upon some othe subject, than deductions, or any other species of supplementary remarks in any manner connected with the subject. Nevertheless under this head he sets forth conclusions to which *he* has arrived, which are as follows:

1st. That notwithstanding he offers the belief that "there is not a medical school in the country, in which either of the professors of the practice of medicine, or of surgery, even make the slightest allusion in their lectures to this specialty, the professors of anatomy being the only ones who touch at all upon this topic, and for all practical purposes, the little they do say is altogether useless," yet he is firmly convinced, that by superadding a single dental chair, "all these difficulties and impediments could be speedily and entirely removed."

The second conclusion come to under this head, is, that "what are termed dental colleges," are institutions wholly without merit, not only incapable of remedying the evils of which he so much complains, but that "they most effectually and glaringly magnify them."

But let us return, and notice more in detail the *arguments and facts* adduced by Dr. Trenor, commencing with his "firstly," or "medical dentistry," and to which we may add his "secondly," or "surgical dentistry," both being treated by him in the same light.

Now in regard to the general proposition that *the dental surgeon should* be familiar with the human system, and with all its laws, both in health and disease, and with such collateral branches of science as are necessary to elucidate the whole subject; or that he should in short be familiar with at least every elementary branch of medical science, surgery included; we say this is a proposition, the truth

and justness of which we not merely admit, but contend for. Nor are we more inclined to dispute his *second* conclusion, under this head, viz., that physicians not specially, or dentally educated, are not qualified even to act as dental advisers, much less dental practitioners. Nor his third conclusion, viz., that medical schools, as now constituted, are incapable of imparting the necessary information or instruction to qualify students for the practice of dentistry.

This last conclusion or rather *fact* we learned at no small cost, having sought to qualify ourself through this means to discharge the duties incident to dental surgery. But after having attended two full courses of medical lectures, with this object distinctly and anxiously in view, and had received the *honorable*, not the *honorary* degree of Doctor of Medicine, we found ourselves in possession of all the requisites, *except qualification*, to embark in the profession which we had chosen; and we can most safely add our testimony to the truth of Dr. T.'s statement relating to these schools, when he says, that in them, "the subject of this specialty" (dentistry) "is never alluded to."

But while it is true that Dr. Trenor and ourself have come to very similar conlusions upon the points above referred to, it is equally true that the *reasoning* which has brought us to these conclusions is most widely variant, as are also the corollaries which we respectively draw, relative to *dental education*. It is common to suppose that it matters little what may be the reasoning, so that the conclusion be correct, and this would perhaps always be the case, did such reasoning or theory apply only to the single point upon which the conclusion is drawn; but in this, as in most other cases, the reasoning or theory has a *practical* bearing, whose influence radiates in many other directions, and upon which may depend most important practical details. And most emphatically is this true of the theories presented by Dr. T. to sustain his position. It is for this reason only, that we are induced to notice the reasoning or theory on which Dr. T. founds particularly the *first* of the three conclusions just noticed, viz., the necessity of medical knowledge to the dental practitioner.

Dr. T. commences his argument by informing us "that in all general derangements of the system, and of local ones also, characteristic alterations are produced upon the soft parts of the mouth."

* * * * "Whatever be the character or severity of the deranged state of the mucous membrane, and soft parts of the mouth, the *teeth*, rom their immediate connection with those parts, are necessarily exposed to, and materially and injuriously influenced by, these changes, be they mild or otherwise."

• • • "Not only does all observation and experience fully sustain the correctness of the foregoing remarks, but they establish with equal unerring certainty, the destructive effects which all deviations from the standard of health exercise upon these important organs." "Indeed," he adds, "there are no other facts more *popularly* associated together, or more unequivocally correct in themselves, as cause effect, than with *bad health* to have *bad teeth.*"

"The influence of a healthy or diseased state of the system is in no particular more decidedly manifested, than upon the organs of mastication."

Now note the conclusion. "Hence the obvious and absolute necessity, that the practitioner who undertakes to treat the diseases of the one, should be familiar with the causes, their character, variety, &c., &c., which produce them in the other." In other words, this reasoning and conclusion of Dr. T. may be briefly thus stated:—Inasmuch as the diseases of the teeth are directly derived from, and depend upon, "disease of the soft parts" of the system, it is necessary to study these diseases in the general system in order to comprehend and properly treat the corresponding diseases of the teeth!!

Although it was not designed to enter into a discussion of theories in dental science, yet to leave entirely unnoticed this doctrine, which forms not only the basis of his whole argument, but which lies at the very foundation of all correct dental practice, would certainly be an oversight.

The doctrine is, "bad teeth" arise from "bad health"—or that every disease of the general system imparts its effects to the teeth.

Now if by "*bad* teeth," we are to understand *decayed* teeth, as we are authorized to conclude from this and other portions of his article, then we say that Dr. T. has not adduced a single fact to prove this position; and it is one, moreover, which we feel at liberty to deny in most unqualified terms. Such a doctrine necessarily implies, that such morbific agency is carried on through the medium of the circulation—that its ultimate effect in producing decay is from an inflammation in the bony structure—and that cavities in the teeth, hence, must be *internal*, or at least beneath the enamel—doctrines only, and alike, remarkable for their age and absurdity.

[Here follows Dr. Westcott's arguments in support of his position above taken; and also a criticism upon the cases reported in Dr. T.'s paper, both of which, for want of space, we are obliged to omit. *Ed. N. Y. Jour. Med.*]

What course of instruction is best adapted, and in what way can it be best furnished, are the questions sought to be discussed in Dr. Trenor's *fourthly*, to which we will now direct attention.

Beside that of private tuition, the inefficacy of which, in most cases, is generally admitted, there have been two other methods proposed, and to some extent carried into execution—the one by superadding a dental chair to the present board of professors in our medical schools; the other by instituting schools for this specific purpose, or by the establishment of Dental Colleges.

Now we complain that Dr. Trenor, in his article under consider ation, instead of fairly discussing the respective merits of these two plans, has made it his principal aim, and that too mainly by mere assertion, to laud the former, and *anathematize* the latter.

Of the former method, that of adding a dental professorship to our medical schools, he says, it is a plan by which "all the difficulculties and impediments could be *speedily and entirely* removed;" but in reference to the latter, Dental Colleges, he asserts that "they are a greater drawback to improvement than if they had never existed." Nay more—"they profess to remedy an evil which they most *effectually and glaringly magnify*."

Now, these are pretty strong assertions, and it is of the greatest moment, not only to the dental profession, but to the community at large, to determine their truth or falsity.

To say the least, they are positions which should be backed by a strong array of facts and by sound logic. Now, in all candor, we ask, has Dr. Trenor, in the whole of his labored article, adduced *one single fact showing, or even tending to show*, that all, or any of the evils, which he so graphically describes, and which are universally felt and deplored, "would be speedily and entirely removed," or would be removed *at all*, by superadding a dental professor to those already existing in our medical schools? We say *not one.*

On the other hand, Dr. T. has not even pretended to show, by either arguments or facts, that Dental Colleges are not *exactly* calculated to meet the end for which they were instituted. His remarks under this latter head, are not only *wholly* made up of naked assertions, but they are assertions moreover, which show either that he is willing to *mislead* in regard to their organization, or that he is wholly ignorant of their plan of instruction, &c.

Dr. T., at the commencement of his article, alludes to this discussion, as having been carried on by Drs. Gardette and Harris, and offers the opinion that *each* of these gentlemen "are abundantly able

fully to illustrate and *sustain* the views which they have respectively assumed;" but it would seem before he gets through, saying nothing of the intrinsic difficulty of "*sustaining*" both of two antipodal positions, that he has discovered, that while the former is "abundantly able to sustain" *his* position, the latter comes off wholly vanquished, and with his cause entirely annihilated. This discussion between Drs. Gardette and Harris, we read with great interest and care, but the conviction which it left upon our minds was, that neither was quite right; for while we differ most emphatically with the former of these gentlemen, in supposing that this superadded chair can furnish the adequate and necessary instruction for qualifying the student for the *practice* of dental surgery, the effect upon the *dental profession*, so much feared by the latter, gave us no uneasiness. The impressions which we have entertained have been entirely favorable to these superadded chairs, and if their benefits are curtailed, or, much more, transformed into evils, it will be by making improper selections to fill them—by appointing men more thoroughly imbued with prejudice than science, and who regard these chairs not merely *a* means, but the "*only*" means of disseminating dental intelligence, and of correcting the evils of empiricism—men, who feel that these chairs must, of necessity, place themselves in a hostile attitude towards all other means and institutions professedly having the same end in view. But we entertain no doubt that their effect, *if properly filled*, is to be salutary upon both professions; for while they may be made to impart to the general medical student much useful and valuable information, they may effect much good as auxiliaries to Dental Colleges, by doing something towards preparing the student for a more thorough and practical course. We have also looked favorably upon the influence they would be likely to have upon the *public*, by bringing into more general recognition the higher claims of dental science through medical practitioners. Physicians themselves have too long underrated dental surgery as a branch of the healing art; nor is this to be wondered at, when we consider that they have had no more means of judging of its merits than theologians or lawyers, never having heard this specialty even alluded to in any lectures they have attended, or in the books which they have studied. This certainly is wrong, particularly when we consider that the community so generally look to them as legitimate counsellors and guardians upon this subject. This evil, and it is one of much greater magnitude than is generally appreciated, could, by such a professorship, be in a great measure corrected. But, to suppose that a single teacher,

in a school where from six to eight teachers of other branches are each making an equal draft upon the time and attention of the student, could give a course calculated, or in any degree adequate to qualify students for dental practice, is the very acme of presumption and folly.

This must be left for institutions where the entire time of the student is to be devoted to dental subjects, where even the elementary branches of anatomy, physiology, pathology, therapeutics, and chemistry, are taught strictly with reference to qualifying students for the *practice* of dental surgery. Is then the student in general medicine, although he may be studying the same general facts and principles which constitute the basis of much of dental practice, on the right road to dental qualification? This is not only an important question in many points of view, and one lying at the very basis of this whole discussion, but it marks the exact point at which the views of the disputants on this question begin to diverge.

Although Dr. Trenor admits, nay, avers, that "there is not a medical school in the country in which either of the professors of the practice of medicine or surgery ever make the slightest allusion in their lectures to this specialty (dentistry), the professors of anatomy being the only ones who touch at all upon the subject; and for all practical purposes, the little they do say is altogether useless;" yet, he seems some how or other to be fully impressed with the idea, that the students who attend such lectures, must be *impregnated* with a sort of *latent* knowledge of the whole matter, and which, like the latent caloric of cold air, can, by the "condensing syringe" of this *dental* professor, be *suddenly* eliminated and set free!

Now we confess that we have not the slightest faith in any such alchemic transformation.

Although we may grant that a little leaven may leaven a large lump, yet this requires an essential condition, which does not at all enter into Dr. T.'s plan, and which he seems wholly to have overlooked, and this is, that *the leaven must be interspersed and diffused throughout the whole lump.*

The leaven which the "woman took and hid in three measures of meal," we venture to say, was not done up in a separate parcel, and "hid" in one corner, but it was so interspersed throughout the whole mass, as to be brought into contact with, and exert its influence upon every particle. Now how is the leaven of this dental professor to diffuse itself throughout the mass of lectures, given by a board of medical professors, who, as Dr. T. admits, have "never made the slightest allusion" to dentistry?

No teaching is worth having, particularly if taught to qualify one for a practical employment, *unless the facts and principles as they are presented* are *applied practically* to the pursuit in question, and much less would it be valuable if every application which was made, as in the case of these medical lectures, had reference to something *foreign* to the object of such pursuit. Now it is evident, from Dr. T.'s own testimony upon this point, that not one of the professors in a medical school ever make a single application of either facts or principles to dentistry; for this would be very difficult, if "they never make the slightest allusion to this specialty."

If therefore, the dental student gets such applications in a medical college as would render the lectures, say of seven-eighths of the professors, of the least avail to him, the dental professor would have actually to repeat, at least in substance, the lectures of every other teacher in the school. This would be impracticable, for two very obvious reasons.

First, no man could, in the time which would be allowed him, in such an institution do any such thing; and secondly, were this possible, no class of students could be found, who would have either the time or inclination to listen to his epitomizing dissertations.

Will it be said that we lay too much stress upon the proper *application of facts and principles as they are presented?* Why, practically, the application is not only the gist of the whole thing, but it constitutes the sum and substance of all utility connected with it. Nor would it be at all reasonable to suppose the uninitiated *student could anticipate* and make all the appropriate and practical applications which perhaps had been overlooked by older heads, and which for a long time had been well stored with these very facts and principles. Such a supposition would, to a very great extent, imply that no new art or science remains to be discovered, nor any old ones improved, nor new inventions made; for all these must depend mainly on *new applications* of long familiar facts and principles.

What marks the essential difference, between dentistry as now practised, and dentistry as understood and practised fifty years ago? Has the change been wrought by the discovery of a host of new facts and new principles? By no means. Almost the entire difference, and which is certainly a very great one, *consists in new applications* of Medical, Chemical, and Mechanical principles, and facts which were nearly or quite as familiar at that day, as at the present.

There is scarcely a greater difference between any two distinct sciences, or arts, than there is between general and agricultural chem-

istry, while the latter depends entirely upon the principles of the former. In what then consists this comparatively new science which has wrought such great changes in agriculture in every civilized country?

Essentially, if not wholly, in new applications of old and well-known facts and principles. Is there no distinction between Electro-telegraphing, and the abstract principles of Electro-magnetism, which were understood many years before this magic machine was invented?

Professor Morse did not create, or even discover, either the facts or principles upon which his wonderful invention was based, but he *simply applied* those already understood to a new purpose, or in a new way. But the result was no less momentous or astonishing; nor does this in the least detract from the honor due the inventor.

Now in the light of these facts and considerations, let us examine for a moment the resources of a medical school, even with this appended dental chair, and see how far they meet the end of qualifying students for dental practice.

We have seen that "not the slightest allusion is made to dentistry" by the *medical* professors—the *impossibility* of a sufficient recapitulation of these lectures by the *dental* professor, to make the necessary practical application, and lastly the *utter inutility* of such lectures without appropriate applications. But waving for the time all these formidable obstacles, another set hardly less serious are at hand, staring us in the face. These may be in general terms expressed by saying, that while medical schools teach far too little, they at the same time teach far too much. In other words, the subjects discussed from the respective chairs in a medical college, by no means embrace the whole range which should come into the catalogue of subjects which must be understood by the intelligent dentist. The facts and principles peculiar to dental science, and which never come into the programme of medical lectures, embrace a wider and more extensive field, than can be cultivated by any one man, during the time allotted, to any single chair, in any institution; and this without including a single item relative to mechanical dentistry, which deserves a very different consideration from that given this branch by Dr. T., particularly, if we include as he has done, under this term, those delicate and difficult manipulations involved in surgical dentistry. Here then there is a demand for at least two dental chairs, and not less than one demonstrator of operative and mechanical dentistry; and in dental schools, even the combined efforts of

these three teachers, are hardly sufficient to meet the demand for this kind of instruction.

Now, while it is true that medical schools, even with this supplementary chair, must fall far short of covering the whole ground, even in the imperfect way described, it is equally certain that they embrace far too wide a field. To any one familiar with what is taught in medical colleges, this is a proposition too nearly self-evident to require a single word of elucidation. What possible claim can the professor of obstetrics set up, in asking the dental students to listen to his course?

Examine the array of subjects presented and discussed, from the chair of "theory and practice of medicine," and how many of them will you find in any degree approximating dental subjects, or in the least calculated to benefit the dental student, except so far as they may occasionally elicit some fact, or general principle, but which, as we have contended, is scattered to the winds for want of proper application. It is hardly necessary to inquire, how much the dental student would be interested in the subject of cholera, smallpox, eruptive diseases, and in short, almost every disease of the general system, as discussed from this chair. It would be almost an equal waste of time to pursue the same inquiry relative to the topics discussed from the chair of general surgery. As in the case of the other chairs, the professor of surgery may, and must, often exhibit facts and principles, which, if properly applied to the subject in which the dental student is directly interested, would be of great service to him; yet much the greater proportion of the time of this professor is spent in discussing such accidents, operations, and diseases, as cannot by possibility either interest or practically benefit him in the least. Nor is this same objection invalid as applied even to the more elementary branches of medicine, anatomy, physiology, pathology and chemistry. The topics discussed from these respective chairs may be so curtailed and modified, as to embrace every item interesting to the dentist in a far less space, and in a way requiring not more than one half the time usually allotted to these discussions.

Now upon one point we wish not to be misapprehended. Our objection to this mass of incongruous, and if not inapplicable, most certainly unapplied material, as offered by Dr. T. to the dental student, is not that we are afraid that any amount of intelligence upon every and all subjects, is to render him the less qualified to practise his profession judiciously, but it is, that they are crowded in and

made to take the place of that which is indispensable in a proper dental education. They not merely occupy a space, but they usurp it to the exclusion of what is essential to qualify them to practise the profession at which they are aiming. Is it not then the very height of absurdity, to expect that a proper dental education could be acquired at such an institution?

At the very best, it would be like advising a New-Yorker, who wished to go to Boston, to make his trip by way of Buffalo and the Canadas. This might do for the pleasure-traveller, with full purse, and an abundance of time, but it might ruin the man of business, and especially the young man, who, with his hard-earned and limited means, is under the necessity of taking the most direct and economical route to his place of destination.

We have now enumerated, and endeavored to scan the means which Dr. T. assures us are sufficient "speedily and entirely to remove all the difficulties and impediments" arising from "an entire want, up to the present period, of any efficient, systematized course of instruction in dentistry;" and now, as to how fully he has sustained these remarkable assertions, we leave the candid reader to judge.

But Dr. T. is not satisfied with establishing, as he evidently and most complacently supposes he has done, the great merit of his peculiar and extraordinary views upon dental education, but carries the matter so far, as will be seen by the above quotation, as to deny that any other "efficient and systematic means" ever existed.

This assertion is made with the full knowledge of the fact that there were, at the time he wrote, three dental colleges in the United States, one of which has been in operation nearly twelve years.

But in respect to his opinion of these institutions he has not left us to conjecture. "Under the plea of remedying all these evils," he says "what are termed Dental Colleges have been recently brought into existence!"

This astonishing announcement is followed by a complaint, that "some of the members of the medical profession have, without sufficient investigation, accorded to them a degree of countenance and approbation to which it can be easily shown that they are by no means entitled."

He continues by *asserting*, not by "showing," that "they come before the public with such confident promises and plausible pretensions, and, as at present constituted, are so decidedly inefficient, that they are a greater drawback to improvement than if they had never existed." "They profess to remedy an evil which they most effectu-

ally and glaringly magnify. They hold out the idea of giving a complete and finished course of instruction on dentistry, while full two-thirds of what should be taught, and that the most important too, namely, all the instruction which every medical school inculcates in medicine and surgery, it does not enter into their arrangement, nor do they possess the ability with any degree of usefulness or benefit to perform."

Having examined "the letter," we will now look at the postscript which we have quoted above. We confess that his last sentence is somewhat jumbled and confused, but if we understand these quotations aright, they contain the four following grave charges against dental colleges, viz:—

1st. It does not enter into their arrangement to give *any* of that instruction which every medical school inculcates in medicine or surgery. 2d. If they had any such arrangements, "they" (their managers or teachers we suppose he means) "do not possess the ability to perform with any degree of usefulness or benefit."

3d. They profess to remedy an evil which they most effectually and glaringly magnify.

4th. The fourth charge is rather in the light of a corollary, and may be thus stated—therefore "they are a greater drawback to improvement than if they had never existed!"

Now what proof has Dr. Trenor offered to sustain his general abuse and attack upon dental colleges? Is it contained in his groundless theories, of which the first half of his article is made up? Or in the cases presented of outrageous blunders committed by "eminent surgeons and physicians" in their attempts to turn dentists?

As to his theories, they prove nothing at all, they themselves having no foundation in fact; and as to his cases, they show most clearly that some means differing *widely from those furnished at medical schools*, are necessary to qualify men for practising dental surgery. If Dr. T. intended to wind up his articles with these broad charges, why did he not, while enumerating cases, find *at least one* which would show that those who had graduated at "what are termed dental colleges" were still uneducated, or in any sense unqualified for dental practice? There are now in the United States at least one hundred and fifty regular graduates of dental colleges, and had we been about to condemn the whole race, we would have taken some pains to look up at least one ignoramus among them, and held *him* up to ridicule, instead of those "eminent surgeons and physicians"

who were educated at the very place declared by Dr. T. to be the only one calculated to make good dentists.

But let us return and examine a little more in detail his first charge, which is in substance, that "it does not enter into the arrangement" of dental colleges, to teach the necessary principles of medicine and surgery, and which may be acquired at medical schools.

Our first remark in regard to this assertion, or charge, is, simply, that it has not the slightest foundation in truth. We can perhaps in no better way show this, than by exhibiting the *actual* "arrangement" of these schools, in respect to their chairs, and the subjects discussed from each. In the "New-York College of Dental Surgery," at Syracuse, and which has received the sanction of the Legislature of the State of New-York in granting an ample charter, there are five professorships and one demonstratorship. *Three* of these professorships are devoted to the discussion of those scientific subjects, arranged under similar chairs, in medical schools.

The other two chairs pertain purely to the science and practice of dentistry—while it is the business of the demonstrator to see that each student carries out their teachings in actual practice, both in mechanical and surgical dentistry. The names and functions of the respective chairs in this school, are as follows, viz.:

1st. Anatomy and physiology, and general principles of surgery.

2d. Special pathology and therapeutics.

3d. General and special chemistry.

4th. Theory and practice of dental surgery, and dental technology.

5th. Institutes of dentistry, dental hygiene, and comparative dental anatomy.

This is the "*arrangement*" of which Dr. T. avers that "it leaves out full two-thirds of what should be taught, and that the most important too," the truth and fairness of which we now leave the reader to judge.

It is true that we have no chair of obstetrics, nor of "theory and practice of medicine," nor of *general surgery*, simply because in our judgment the subjects appropriate to these chairs are mainly foreign to dentistry, and because their place can be supplied by those far more necessary and useful to the dental student—their place being taken by the two dental chairs above named, and the demonstratorship.

The broad and exact distinction between dental and medical

colleges, is, that while *in the former are taught all the elementary branches of medicine and surgery*, and every fact and principle exhibited is so applied as to have strict reference to dentistry, they leave out of their "arrangements" the chairs of a medical school, pertaining to *practical medicine and surgery*, and supply their places with those pertaining to dental science and practice. Now how does this plan and arrangement accord with Dr. T.'s assertion, that no provision is made to teach any thing but mechanical dentistry?

If Dr. T. knew what *was* the "arrangement" in each of the dental schools, for teaching in the most thorough manner every elementary fact and principle in general medical science, and this too in the right way, with reference to a *dental* education, the barefacedness of his assertion to the contrary stands out in bold relief; and if he was ignorant of the whole scheme, and this is certainly the most charitable construction, then the least shadow of modesty would have dictated the withholding of such opinions and assertions, till he did know what their arrangements were.

In respect to Dr. T.'s second charge, that of want of "ability" of the teachers in these schools, we cannot, without borrowing some of his delicacy and feeling, say much. About the only comment we are inclined to offer upon this subject, is, that these medico-dental chairs in each of these schools, are filled by men educated in the very way in which he points out, and at the place of which he says, it is the "*only*" place whereat one can obtain the proper education.

Not only so, if we mistake not, most of the teachers in these departments in the several dental colleges, were previously teachers in medical colleges. The chair of anatomy and physiology in the "New-York College of Dental Surgery," is occupied by a gentleman who had for ten years stood high as a teacher of similar branches in one of our first-class medical schools, and the chair of pathology and therapeutics by one who had been a professor in a medical college formerly, for nearly twenty years. Now if these men have all at once become *incapacitated* for teaching, simply because they now lecture to a dental class, it is a phenomenon not easily comprehended by common minds, and we therefore pass it to Dr. T. for solution. If he makes this point as clear as he has some of his other positions, we trust all will be satisfied.

The *third* charge is, that "they *profess* to remedy an evil which they most effectually and glaringly magnify."

This, and the following, or fourth charge, which declares dental colleges to be not merely powerless in respect to advancing dental

education, but positively "a great drawback," may be considered in the same connection, they being somewhat similar in import, and alike exhibit the self-same complacency of our author in making assertions.

After having shown the groundlessness and absurdity of the first and second charges, upon which the last two entirely rest, it would be a waste of time to give these a separate consideration. In regard to them we have only to remark, that they express sentiments which we exceedingly regret to see put forth by one occupying the high and responsible post which our author has been selected to fill. For him, or any other man, to feel that to foster one scheme for promoting dental education, necessarily demands hostility on his part towards every other plan, and moreover, that he should feel called upon to express such bitter vituperations against not only the project itself, but against all connected therewith, we say, this seems to us not only great folly, but exhibits a spirit which must greatly curtail his good offices as a teacher.

In our remarks thus far, we have only *incidentally* considered the claims of Dental Colleges, but we trust that enough has been said to divest them of a little of the odium sought to be cast upon them by Dr. T., though we may have failed to demonstrate that they are the "only" means of furnishing a complete and systematic dental education. We have referred to their organization, and shown that it amply provides for imparting in the most thorough manner all of the necessary instruction in general medical, surgical, and chemical science—that equal facilities are furnished for teaching, not only the *science*, but also the *practice* of dentistry. This last is done by furnishing the student actual practice, to be done by himself, and under the eye and direction of a proper teacher. If this brief outline of their arrangement shows that "full two-thirds of what should be taught, and that the most important too," is left out of their "arrangements," then we confess our inability to fill the blank.

Dr. T. has not even seen fit to inform us what this dental professor in a medical college is to teach, much less how he is to fill the tremendous void in medical schools as respects proper dental instruction. The term *dental professor* is, to say the least, wonderfully vague and indefinite, being just as specific as the term *medical professor*, which would vaguely imply a teacher of some one of a dozen departments in general medical science.

PART SECOND.

BIBLIOGRAPHICAL NOTICES.

ART. XI.—*A Complete Treatise on Midwifery: or the Theory and Practice of Tokology, including the Diseases of Pregnancy, Labor, and the Puerperal State.* By ALF. A. L. M. VELPEAU, M. D. Translated from the French. By CHARLES D. MEIGS, M. D., Professor of Midwifery in the Jefferson Medical College, etc., etc. Fourth American, with the additions of the last French Edition. By WM. BYRD PAGE, M. D., Lecturer on Obstetrics in the Philadelphia Medical Institute; Consulting Surgeon to the Philadelphia Hospital, Blockley, etc., etc. *With Numerous Illustrations.* Philadelphia: Lindsay and Blakiston. 1852. 8vo. pp. 652.

THE deserved popularity of M. Velpeau's Midwifery is such that it is only necessary for us to refer to the additions made to this edition. These are so numerous that the work may be said to have been almost re-written. Several new chapters have been added, and the whole work may be said to embrace now a full and complete exposition of the present condition of the science of midwifery.

ART. XII.—*Essays on Life, Sleep, Pain, etc.* By SAMUEL HENRY DICKSON, M. D., Professor of Institutes and Practice of Medicine in the Medical College of the State of South Carolina. Philadelphia: Blanchard & Lea. 1852. 12mo. pp. 301.

THESE essays from the pen of a distinguished professor will, we hope, from the interesting questions they involve, and the glowing style and devotional fervor which characterize them, command the attention of the good and philanthropic portion of our profession.

ART. XIII.—*A Treatise on the Anatomy, Physiology, and Diseases of the Human Ear.* By JAMES BYAN, M. D., Professor of Surgery in Geneva Medical College; Professor of Institutes of Medicine and Medical Jurisprudence in Philadelphia College of Medicine, etc. Philadelphia: Published by the Author. 1851. 12mo. pp. 124.

THE matter of this little volume is the substance of a course of lectures delivered in the autumn of 1850, before the class attending the Philadelphia College of Medicine. We have perused the volume with much pleasure and profit, and commend it to the favorable attention of the profession.

ART. XIV.—*An Analysis of Physiology: being a Condensed View of its important Facts and Doctrines, Designed especially for the use of Students.* BY JOHN J. REESE, M. D., Lecturer on Materia Medica and Therapeutics in the Medical Institute of Philadelphia, etc., etc. Second Edition, revised and enlarged. Philadelphia: Lindsay and Blakiston. 1852. 12mo. pp. 368.

THIS edition of the Analysis of Physiology has undergone an entire revision—has been re-written, and much new matter added. To the student of medicine it will prove valuable and useful while revising his studies.

ART. XV.—*Elements of Chemistry.* By THOMAS GRAHAM, F. R. S., Professor of Chemistry in University College, London, etc., etc. Second American from an entirely revised and greatly enlarged English Edition. With numerous Illustrations. Edited with Notes. By ROBERT BRIDGES, M. D., Professor of Chemistry in the Philadelphia College of Pharmacy, etc., etc. Philadelphia: Blanchard & Lea. 1852 Part 1st, 480, pp. 430.

WE are much pleased to receive this work in an American dress. Its merits will command for this new edition a favorable reception. When complete we shall give it a more extended notice.

PART THIRD.

FOREIGN MEDICAL RETROSPECT.

PATHOLOGY AND PRACTICAL MEDICINE.

On Albuminous Urine; and on so-called Chylous Urine. By H. Bence Jones, M. D.

In cases of so-called chylous urine, albumen appears in the urine. I have here a specimen of urine made by a patient suffering from this disease. It was passed as white as you see it—indeed, whiter; for, as it has been standing for some months, it has become a little darker by decomposition. In another portion of this same urine, you see the white matter has risen up into a curd. If I take a portion of this urine and treat it with ether, I shall find it contains a substance perfectly soluble in ether; for, by agitating the two together, the urine loses its thick appearance, and becomes very nearly clear. (Experiment.) The ether rapidly separates again, carrying with it a great deal of fat, a slight deposit taking place. If I pour off the ether, and evaporate it to dryness, I shall get, not a crystalline mass, for the fat is not crystallizable, but a mass of fatty matter, such as you see in this specimen, which has been collected from many quarts of urine. I have here other specimens of the same urine, passed at different hours, in which no fatty matter is seen, nor can any be extracted by ether; but if I add nitric acid, and apply heat, I shall find that there is plenty of albumen present. So, also, if I add nitric acid to the liquid from which the ether was poured off, I shall be able to show, by the dense precipitate which is formed, that, in addition to the fatty matter, there is also a considerable quantity of albuminous substance present. An interesting point, on which I was enabled to satisfy myself in this case, by drawing blood from the arm, was, that the blood did not contain any excess of fat whatever. The fat and the albumen only came at certain periods of the day; and if I kept my patient quiet, that is, if I made him lie in bed, or if I examined the urine early in the morning, before he got out of bed, I found comparatively healthy water, most commonly not containing the slightest trace of an albuminous or fatty substance. If I made

him get up before breakfast, and walk about, he would pass urine containing no fat, but giving evidence of albumen in plenty, and sometimes, also, so much fibrin that the urine would coagulate, not into a white mass like blanc-mange, but into a sort of jelly-like brownish coagulum, consisting of fibrin, tinged sometimes with the coloring matter of the blood. If I made him take breakfast before exercise, the urine was milky, as in the specimen before you; but, by making him lie in bed, the water was more healthy; whilst, by giving him much food, more especially fatty food, an increased quantity of fat appeared in the urine. I made many experiments as to the effect of food, exercise, rest, and medicines; these are recorded in the *Philosophical Transactions* for 1850, but more perfect medical details are given in the *Medico-Chirurgical Transactions* for the same year. The patient is an intelligent man, who keeps an accurate record himself of the appearance of the urine each time it has been passed since I first saw him, a year and a half ago. There has been no trace of the disease for many months, except on last Christmas-day. I had warned him that any thing that gave increased violence to the circulation would bring the complaint back again; but after eating and drinking on Christmas-day, like other people, he came to me the next morning, bringing with him a specimen of his urine, which was milky. He was again put on the treatment which had proved efficacious before—gallic acid and rest, and again with perfect success. As much as a drachm or a drachm and a half, and even two drachms of gallic acid being given in the course of the day. Since Christmas the urine has been perfectly healthy, and I believe no fat or albumen will be found in it again, unless violent exercise is taken. With such exercise the feeble vessels allow these substances to pass through; but with rest and gallic acid the vessels are contracted, and thus the disease is checked.

The following table of the influence of diet, of pressure, by means of a strong belt, and of medicines, is taken from the *Medico-Chirurgical Transactions.*

Effect of Diet and Medicines on so-called Chylous Urine.

	Chylous in different degrees.	Free from chyle.
On animal food in 1000 observations	968 times	32 times.
Vegetable food "	910 "	90 "
Pressure-belt loose "	667 "	333 "
Pressure-belt tight "	638 "	362 "
When matico was taken "	474 "	526 "
When gallic acid was taken "	17 "	983 "
After gallic acid was taken "	0 "	1000 "

The most interesting fact connected with this case of albuminous urine, was the occurrence of the albumen only at certain periods of the day. It is very probable that this disease, in a much milder form, occurs more frequently than has been supposed, and possibly these are the cases in which gallic acid has been said to stop the albumen in the urine of Bright's disease.—*Medical Times.*

Vaccination Tested by the Experience of Half a Century. By George Gregory, M. D.—Before the Royal Medical and Chirurgical Society a paper was read by Dr. Gregory.

The author commenced by observing that variolous inoculation was first heard of at Constantinople, in 1700, but was not practised in England till 1721, and did not become general till 1750. In 1746 the Small-Pox and Inoculation Hospital was established; and from this period variolous inoculation made favorable progress in the good opinion of the public throughout England. In France, however, during the same period, it was met with neglect, notwithstanding the efforts of De la Condamine to convince his countrymen of the merits of inoculation; and prejudice extended so far that the parliament of Paris, in 1763, prohibited the practice of variolous inoculation within the walls of that metropolis. The author then proceeded to notice the twofold object with which inoculation was performed—first, to banish from the mind all anxiety as to the taking of small-pox in after-life, by giving it at once; and secondly, to insure a mild form of disease, free at least from secondary fever. Inoculation was eminently successful in fulfilling and attaining these objects. Nevertheless it undoubtedly had its disadvantages: it was essential to practise it in early life, before the infantine constitution could be known; and it thus often lighted up the dormant embers of scrofula. In 1798 the practice of variolous inoculation had been tested by the experience of half a century. In this year Jenner published his first treatise on Vaccine Inoculation, the advantages of which were at once confidently proclaimed; and in the following year seventy-three of the most eminent physicians and surgeons of the metropolis had signed a document, purporting "that persons who have had the cow-pox are perfectly secure from the future infection of the small-pox." The first claims of Jenner in favor of vaccination were singularly modest; but in 1802, he announced to the House of Commons—first, "that vaccination is attended with the singularly beneficial effect of rendering, through life, the person so inoculated, perfectly secure from the infection of small-pox;" and secondly, "that vaccination had already checked the progress of the small-pox, and, from its nature, must finally annihilate that dreadful disorder." The quantity of small-pox that still prevails, and the practice of revaccination almost universal, lead to the conclusion, that these broadly urged claims in favor of vaccination have not been substantiated. Fifty years have passed since Jenner petitioned parliament; and the author proposed by the experience of this half century, to test the merits of vaccination. But first, what is understood by vaccination? Something prophylactic of small-pox; or something identical with small-pox? Cow-pox is a disease *sui generis*, and it cannot be said that he who has undergone vaccination has had small-pox in a mild form. A certain relationship exists between the two; but though variola by passing through the cow becomes cow-pox; yet cow-pox has never, in its turn, been converted into small-pox. Cow-pox and small-pox are, at all times, and in all countries, clearly and

readily distinguishable. The object of inoculation was to give the disease of small-pox, not to prevent it. The object of vaccination is to prevent, not to give, small-pox. Recurring small-pox and small-pox after vaccination, are not merely different from each other but actually opposed to each other. "If a person inoculated in childhood contracts small-pox in adult life, he suffers small-pox a second time, but a person taking small-pox after vaccination, takes the disease for the first time." The enemies of inoculation, as well as the supporters of vaccination, had severally taken their stand on recurrent or secondary small-pox. De la Condamine declared that not one person in 10,000 ever took small-pox a second time. The fate of Louis XV. was alluded to, and it was shown that the king's disease in early life (1724) was not small-pox, but a sharp yet brief attack of fever: that living in the constant dread of small-pox his distrust of inoculation was fearfully chastised by his death under a most aggravated attack of confluent small-pox. The author then noticed the extreme rarity of recurrent small-pox. The transactions of the Society extending through a period of forty-seven years, contained only one solitary case of recurrent small-pox. In many cases of so called secondary small-pox, the evidence of antecedent variola could not be relied on, as a case narrated in the *Edinburgh Medical and Surgical Journal*, October 1818, clearly established. Many of the cases which the author had inquired into, were equally undeserving of credit. To arrive at a trustworthy conclusion, the details of both attacks should be carefully given. Very few medical men have in such cases witnessed both the primary and secondary seizure, and the author emphatically expresses himself as thoroughly convinced that the recurrence of small-pox is among the most rare events in the annals of medicine. The author then contrasted the occurrence of small-pox after vaccination. The records of the Small-Pox Hospital throw much light on this subject. The following is a summary of the statistical details appended to the paper:—During the last eleven years, 4092 persons have been admitted into the hospital, having small-pox, of whom 2168 had been vaccinated, and 1924 were unvaccinated: more than one-half of those admitted had been vaccinated in early life. The majority were of adult age, a few between 9 and 15; but below the age of 9 scarcely any vaccinated person was admitted. It would thus appear that the susceptibility to the variolous miasm among vaccinated persons increases as life advances. The reverse of that happens in the unvaccinated. In 1850–51 the total number of cases of small-pox admitted was 976, of whom 162 died, being at the rate of 16 per cent. Of the 976 admitted, 41 were infants below the age of 5, all unprotected, of whom 22 died; 101 were children between 5 and 15, majority unvaccinated, of whom 25, or one-quarter died; 685 were adults from 15 to 30; 109 beyond that age. Total, 794 adults; the larger proportion of these had been vaccinated, of whom 115 died, or 14 per cent. Of the total number admitted—976,—613 professed to have been vaccinated; 569 exhibited cicatrices; of this latter section, 25 died,

being at the rate of 4 per cent. In 1851 the proportion of persons admitted after vaccination amounted to 65 per cent.: it was only 44 per cent. in 1841. The increase is attributable to the extensive diffusion of vaccination. The mortality at the Small-Pox Hospital during the last two years among the well vaccinated section has only slightly exceeded 4 per cent. The experience of half a century abundantly demonstrated that small-pox, though it has been largely controlled, will always abide among us, and that the notion of extirpating it is absurd and chimerical; and while acknowledging the immense benefits which have accrued from the splendid discovery of Jenner, vaccination had failed in establishing in the mind a confident feeling of security: it must be viewed as a beneficent provision of Nature, not for the extermination, but for the mitigation of small-pox. The author proceeded to show that inoculation had been abolished by act of parliament in 1840; and that, though rigidly observed, small-pox was just as prevalent now as then; that the quantity of small-pox had not in the smallest degree been affected by the prohibitory clauses of that act; that while this act prohibited inoculation, it did not render vaccination compulsory. Numbers, therefore, remain as a pabulum whereon small-pox might prey. If the legislature could not or would not enforce vaccination, the restriction on inoculation should be removed. With proper precautions, inoculation might be safely adopted. Practised by other than authorized medical practitioners, it would of course be punishable as a misdemeanor by fine and imprisonment. With such restrictions it might be practised with perfect security. By far the larger proportion of mankind would continue to adopt the mild and safe process of vaccination; while others would prefer that measure which, occasioning a greater amount of immediate, abolished all prospective anxiety. Educated as the present race of medical practitioners were, and acting, as they would act, under the supervision of a discerning press, both public and professional, they would exercise their judgment to the entire satisfaction, and ultimately to the great and permanent benefit of the country.

On the Treatment of Erysipelas by Collodion and Castor Oil. By M. Guersant.

M. Guersant has recently employed with advantage, in a severe case of erysipelas, an application to the skin, consisting of collodion in combination with castor oil. The formula was—collodion, 30 parts; castor oil, 2 parts, mix. This varnish was applied once on each of three successive days to the parts attacked by the exanthema, and caused the cessation of the burning pain, and the disappearance of the dark redness of the surface; the general symptoms seemed, at the same time, to be alleviated by some favorable influence, and the boy who was the subject of experiment became convalescent much sooner than had been expected.

It is to M. Robert Latour that the idea of mixing the collodion with castor oil is due; but his formula is not the same as that em-

ployed by Mr. Guersant. To avoid the inconvenience of the splitting and scaling off of the collodion, and to prevent its exercising upon the inflamed parts a degree of pressure which some persons would find to be intolerable, M. Latour has proposed to add to the ordinary collodion a fifteenth part by weight of turpentine deprived of its volatile principle by evaporation, and five or six drops of castor oil to every thirty grammes (463 grs). We have not seen this kind of collodion used; but as for that of M. Guersant, we are informed by himself that it forms a very soft covering, far superior in point of elasticity to ordinary collodion. It is, besides, more easily detached, and a simple poultice suffices to remove it in pieces, without causing the slightest pain to the patient. The castor oil is preferable to other oils, being more unctuous, and having less of drying quality.—*Journal de Médecine et de Chirurgie Pratiques*, February 1852, pp.

On the Curative Treatment of Aneurism of the Aorta. By O'B. Bellingham, M. D.

At the meeting of the Surgical Society of Ireland, held on the 24th January, Dr. Bellingham read a most important paper on this subject, and illustrated his observations by cases. The following are the conclusions which the author deduced:—

1st. That aneurism of the aorta is not necessarily an incurable disease.

2d. That it appears to be more amenable to curative treatment than is ordinarily supposed.

3d. That treatment ought always to be specially directed to this object.

4th. That when a spontaneous cure occurs, it is always by the gradual deposition of the fibrine of the blood in layers within the aneurismal sac, until it is filled up.

5th. That if we hope to succeed in effecting a cure, it must be by imitating the mode by which nature brings this about.

6th. That, in order to favor the gradual deposition of fibrine, we should aim at diminishing the mass of blood, and lessening the strength and rapidity of the current through the aneurismal sac.

7th. That this can only be indirectly accomplished by acting on the general circulation.

8th. That neither bleeding, purgatives, diuretics, digitalis, nor the various other remedies which have been employed in this disease, can be depended upon for producing these effects.

9th. That an extremely restricted diet, particularly in fluids, continued for a certain time, appears to have the effect of rendering the pulse small, compressible, and slow, and, at the same time, of diminishing the mass of blood.

10th. That the cases related afford evidence that these results may be brought about by treatment conducted on the foregoing plan.

11th. That this method of treatment, to prove effectual, must be steadily and perseveringly carried out, and must be continued until a decided impression is made upon the disease.

12*th*. That it is adapted, not only to aneurism, of the thoracic and abdominal aorta, but to aneurism in any of the immediate branches of these vessels; and that if employed as a preliminary to compression, pain will be diminished, and the duration of the treatment considerably abridged.—*Dublin Medical Press.*

On Quinidine. By Mr. Robert Howard.

This alkaloid, which gained a prize in the great exhibition, has scarcely yet attracted much attention. Some of the cheaper barks now largely imported from New Grenada contain so much of it that it is, perhaps, as well that it should be more studied. The *Cinchona cordifolia*, from that part of the continent, is particularly rich in it. It is, however, contained in larger or smaller quantities in the Bolivian and Peruvian barks—the *Cinchona*, *Calisaya*, *Boliviana*, *rufinervis*, and especially *ovata*.

The sulphate of quinidine is so like the sulphate of quinine, that the eye or the taste can with difficulty distinguish them. It forms the same light fibrous crystallization, and occupies as large a bulk, It corresponds in appearance with the description given by Winckler, of "chinidine." He notices that it has "a remarkably white color and a peculiar faint lustre." Its most striking characteristic is its extreme solubility. Pure sulphate of quinine requires nearly thirty times its weight of boiling water for solution, whilst the sulphate of quinidine dissolves in four parts. On the other hand, the pure alkaloid crystallizes readily out of proof spirit and out of ether, whilst quinine does not crystallize out of either. A very good test for the presence of cinchonine in sulphate of quinine is also capable of being applied to detect the presence of quinine. On this point I would refer for very interesting details to a paper by Mr. Guibourt, in the *Journal de Pharmacie* for January in this year.

In your journal of April, 1843, I gave a test for sulphate of quinine, to which I would again advert, because subsequent experience has proved it to be a tolerably easy, and at the same time exact means of ascertaining its purity. Put 100 grains in a Florence flask with five ounces of distilled water, heat this to brisk ebullition; the sulphate of quinine ought not to be entirely dissolved; add two ounces more water, and again heat it to ebullition; ought to make a perfectly clear solution. If this be allowed to cool for six hours, and the crystals carefully dried in the open air on blotting-paper, they will be found to weigh about ninety grains, the mother-liquor may be evaporated and tested with ether, when any cinchonine or quinine will be easily detected. On examining sulphate of quinine of commerce from several leading manufacturers, I have found all of them give, within a grain or two, the same result, and in each, indications of quinine, though to an unimportant extent.

The above quantity of water (seven ounces) readily dissolves 800 grains of sulphate of quinine: and if one hundred grains of this salt are dissolved in seven ounces of water, the crystals dried as above weigh only fifty-four grains, thus leaving forty-six grains in solution

instead of about ten grains. The medicinal effects of B, quinine deserve investigation, the chemical constitution and the taste appear to indicate a great similarity if not identity.—*Phar. Jour.*

Cure of Ascites and Hydrarthrosis by Iodurettted Injections. By M. Costes. (*Translated from Journal de Médecine et de Chirurgie Pratiques.*) July, 1851.

M. Costes, Physician of the Hospital St. André at Bordeaux, has published, in the *Journal de Médecine* of that city, two cases of uncomplicated ascites, treated by injections containing iodine.

The most interesting of these observations, is the case of a ropemaker, fifty years of age, who, after repeated attacks of intermittent fever, observed that his belly became enlarged. In fact, on the 2d September, 1850, M. Costes examined him, and found signs of a considerable effusion into the abdominal cavity. Paracentesis was several times performed, and each time the most minute examination proved that there was no appreciable organic lesion of any internal organ. On the 16th September, after withdrawing, by a puncture made in the point of election, 7,750 grammes (about 250 oz. Troy) of fluid, M. Costes proceeded to inject into the peritoneal cavity the following mixture:—Distilled water, 100 grammes (1,550 grs.); tincture of iodine, 20 grammes (310 grs.); hydriodate of potass, 2 grammes (30·5 grs.). The injected fluid was suffered to remain for about two minutes, and was then withdrawn through the canula. Immediately after the injection, the patient complained of acute pain, especially towards the left iliac fossa. This pain soon subsided, and was then renewed with greater intensity; at the same time, there were rigors, nausea, thirst, and dyspnœa; the belly became tense and tender, the skin bedewed with a cold perspiration, &c. A vessel of warm water was applied to the feet, an opiate cataplasm to the abdomen, and in the evening, 5 centigrammes (·77 of a grain) of extract of opium were prescribed. On the 17th, twenty-four hours after the injection, there was notable amelioration; the patient had had some sleep; the pain of the belly, though still present, was no longer acute; the fever had abated. On the 25th, the patient's state was most satisfactory. Œdema of the legs was observed, and treated by proper bandaging. On the 1st October, the œdema had diminished, the belly resumed its normal size, and palpation no longer detected the presence of fluid. On the 27th October, the patient left the hospital, and on his return in May (?) 1851, it was found that his health had continued good.

In the second case, that of a woman, the effusion re-accumulated after the operation. The injection was not repeated; and as the subsequent treatment consisted of the repeated use of 30 centigrammes (4·6 grains) of gamboge, and of lemonade, containing 8 grammes (ʒijss.) to the litre (1·76 imperial pint), the cure which followed cannot be cited as due to the injection. M. Costes adds, that he has recently performed the operation in a third case in his clinique, and

has obtained a result so successful as to remove all doubts of the value of the procedure.

Remarks by the Editor of the Journal de Médecine.—Clinical observations so important as these of M. Costes cannot be passed over in silence. We have considered it proper to mention them, in order that they may be associated with those which MM. Dieulafoy, Leriche, Greffon, and Rul-Ogez have already communicated to the medical world. It is thus that science is promoted, and possibly the day is not far distant when we may assent to the proposition of the illustrious physician of Bordeaux,—that to cure idiopathic ascites recourse may simply be had to the ioduretted injections. One incontestable fact is, that the introduction of an irritating fluid into serous cavities is not so dangerous as was formerly believed. In 1829, M. Jobert de Lamballe had an opportunity of convincing himself of this, when he injected into the peritoneum of a woman suffering from simple ascites a large syringeful of water, containing *eight ounces of alcohol.* It is true that this surgeon did not dare, in the first instance, to empty the cavity, and allow the injection to act upon its naked walls, but contented himself with adding the injection to the effused fluid. This operation, assisted by the manipulation of "ballotment," immediately produced a sensation of heat, and even of acute pain, in the part where the column of alcoholized fluid impinged most directly. The curious observation was also made, that the patient continued all day in a thorough state of intoxication. No trace of inflammation ensued, and the patient, of whom, unhappily, nothing is known since she left the hospital, was cured at the period when she was dismissed. Since that period, M. Jobert has been in the habit of injecting diluted alcohol and tincture of iodine into various joints, without ever inducing untoward symptoms. The introduction of the irritating fluid, does not seem to be *inert;* it sometimes causes excessive pain and an assemblage of local symptoms which would terrify one who did not know, that all this disturbance rapidly passes off (s'humanise) without recourse being had to the ordinary antiphlogistics apparently indicated. We lately saw an example of this, in a case of hydrarthrosis of the knee, treated in the Hotel Dieu by the surgeon just named—a most interesting case, which cannot be more appropriately introduced than in this place.

About the end of April, M. Jobert de Lamballe received under his care, in the Hotel Dieu, a jeweller, forty-six years of age, with an old swelling of the left knee. Fluctuation, and the peculiar crepitation termed "bruit de chainon," described by Dupuytren in his account of certain cysts of the fore-arm, and attributed to the presence of albuminous corpuscles, were distinctly perceptible. The patient could not walk without pain. On the 21st May, M. Jobert, having previously, without much benefit, employed discutient compresses, punctured the joint on the inner side with a trocar, and injected through the canula equal parts of distilled water and tincture of iodine. He left a portion of the fluid in the joint, and withdrew the rest; a piece of diachylon was applied to the orifice to prevent the

access of air, the patient was then laid in the horizontal posture, and absolute rest of the limb maintained. At the moment of the injection there was a moderate amount of pain, but next day the joint was so swollen and red that fears were entertained of the occurrence of gangrene. This was the result of excessive exhalation of albuminous fluid. Now, as nature is very powerful in rapidly producing absorption of such effusions, the local symptoms were soon observed to become less intense, no constitutional disturbance supervened, and by the 23d, the patient had slept and felt himself better. The tumefaction and redness were lessened. On the 30th May pain had ceased, and the knee had recovered its normal volume, except at the inner and upper part, where albuminous masses were still perceptible. These, M. Jobert is at present attempting to remove by the continuous application of compresses steeped in lime-water and solution of sal-ammoniac. At present, on the 28th June, the man is in the most satisfactory state; he walks without pain, and will be cured like another patient, a lady, on whom M. Jobert recently performed the same operation for the same complaint. She had suffered for six months, and the treatment by injection was proposed. She at first refused to submit, but the operation was at last performed in presence of MM. Velpeau and Delafolie. The pain was excessive, and the patient was thrown, by inhalation of chloroform, into an alarming nervous condition. As in the preceding case, there followed enormous distension of the knee, and things then fell into their normal condition; on the fifteenth day the patient could raise the leg, which she could not formerly do without giving vent to cries.

What is most singular, the cure in these cases is obtained without compromising the mobility of the articulations.

In M. Costes' observations, we are informed that the abdominal viscera seemed to retain their natural mobility. M. Jobert, too, has found in all the cases of hydrarthrosis on which he has operated by injection of irritating substances, that perfect freedom of motion was preserved. Facts, then, would seem to show, that the cure by injection is obtained by simply modifying the vitality of the serous membranes, and not, as has been asserted of the *tunica vaginalis*, in hydrocele, by the agglutination of the contiguous surfaces of the serous membrane by adhesions.—*Month. Jour. Med. Sci.*

MIDWIFERY AND DISEASES OF FEMALES.

On the Diagnosis and Treatment of Ovarian Disease, with the History of one Hundred and fifty-six Cases. By Robert Lee, M. D., F. R. S., (*Royal Medical and Chirurgical Society*)

The author commences with a description of the human ovarium, its coats and stroma, and the structure of the Graafian vesicles; and he then notices the condition of the organ before puberty, and the changes which take place at that period, after impregnation, and when the catamenia have ceased. Adhesions of the ovario-Fallopian tubes

and uterus are very common. In the unimpregnated state this arises most commonly from inflammation of the peritoneum only; but in puerperal women all the component structures of the ovaries suffer. Thickenings of their coats sometimes are found when there has been apparently no inflammation. Inflammation of the parenchymatous structure terminating in suppuration, in the unimpregnated state, is rare; and the author believes that in those cases where abscesses of the ovaria have burst into the bladder or rectum, they have been the results of scrofulous disease, and not of simple inflammation. Fibrous tumors are sometimes met with in the stroma of the ovaries, which have the same structure as those of the uterus: malignant or cancerous disease also affects the stroma. Both fibrous tumors and malignant diseases are most frequently met with in combination with diseases of the Graafian vesicles, though they may occur without this complication. The greater number of the complex, compound, or multilocular cysts met with in connection with the ovaria originate in the Graafian vesicles; but it is probable that cystic diseases of a different nature are sometimes set up in the walls of enlarged Graafian vesicles. The author refers to the dissection of an ovarian cyst, published in the last volume of the *Transactions*, to show that compound cysts are formed independent of each other, and that the smaller cysts do not grow from the inner surface of the larger ones, but are formed in the stroma of the ovaries external to each other. After noticing the varieties observed in the course of ovarian tumors, the author refers to the table of 166 cases of these diseases. In 41, or about a quarter of the whole, sterility existed, showing a previous unhealthy state of the uterine organs. In 92 the disease occurred between twenty four and forty-four years of age, while the uterine system was in the most active state. In several cases tapping was performed eight or more times, and in no instance was followed by an immediately fatal result; where death took place after tapping, it was attributable rather to the advanced state of the disease than to the operation. The difficulties of diagnosis in some cases of ovarian tumors are pointed out, as in cases of death of a fœtus. The general symptoms may be the same; and it is only by a careful examinatiou of the lower segment of the uterus internally that in any case it can be positively determined whether the symptoms depend on pregnancy or on some ovarian disease. The soft and thick state of the lips of the os uteri, the shortening of the cervix, the expansion of the body, and the floating of the fœtus, would allow of a positive opinion being formed. "If the uterus be unimpregnated, drawn up, and turned to one side, or pressed forward, backward, or downward, and the cavity of the pelvis be filled more or less with a mass which can be felt occupying the brim—and more or less of the abdominal cavity—hard, or soft, and irregular in some portions, with fluctuation in others, we may conclude that the disease is ovarian." For the diagnosis of ascites as distinguished from ovarian dropsy, the author refers to the description given by Dr. Watson, and adds to this the fact that in ascites the fluctuation is usually more distinct,

and that there is an absence of that irregular hardness usually felt in the abdomen when enlarged with ovarian cysts, as also of any unhealthy feeling in the contents of the pelvis. In the latter stages of ovarian disease these diagnostic signs become more obscure. The diagnosis of fibrous tumors of the uterus and ovarian cysts and tumors can, according to the author, be drawn with sufficient accuracy without the use of the uterine sound; and he instances cases in which the employment of this instrument has been productive of evil. Where fibrous tumors are imbedded in the walls of the body of the uterus, the whole organ is felt enlarged and heavy, and the cervix is sometimes shortened as in pregnancy. Attacks of menorrhagia occur, the functions of the bladder and rectum are disturbed, and there are usually pains, with signs of interrupted circulation of blood, in the lower extremities. When cavities filled with fluid exist in the deeper parts of fibrous tumors, the diagnosis is sometimes rendered extremely difficult, if not impossible. With regard to treatment, the author does not put much confidence in the usual remedies. Opening and injecting the cysts has generally been effected by leaving a small canula or bougie in the opening after tapping; and a case is related, communicated by Mr. Phillips, in which the plan of drawing off only a small quantity of the fluid, and fixing a small elastic gum catheter in the wound for five days, was followed by a gradual diminution of the tumor. In a few cases the long-continued use of iodine and liquor potassa has produced a diminution of the tumor; but in the majority of instances these remedies have done no good or have done harm. The author prefers treating the disease by the use of saline purgatives and diuretics, light diet, and the avoidance of much exertion, and of every cause likely to irritate the morbid structures. In conclusion, the author refers to an analysis of 162 cases of ovariotomy, published in the last volume of the *Transactions*. In 60 there was either no ovarian tumor, or the removal was impracticable; 19 of these proved fatal. Of the remaining 102, in which the operation was completed, 42 terminated fatally, and the present condition of the 60 patients who recovered is very imperfectly known.—*Med. Gaz.*

On Healthy and Morbid Menstruation. By H. Bennet, M. D.

Dr. Bennet treats of the physiology of menstruation; of dysmenorrhœa; of menorrhagia; and of amenorrhœa.

Menstruation, Dr. Bennet remarks, is best elucidated in the elaborate work of Pouchet, published at Paris in 1847, entitled, *Théorie Positive de l'Ovulation Spontanée*, in which, as he states, is contained a full and complete account of the author's own important researches, as well as those of nearly all the ancient and modern writers on the subject. To M. Pouchet belongs the credit of having been one of the first to broach the doctrine of spontaneous ovulation as a law in the females of all mammiferæ, and also of having established this law in the most irrefutable manner by experiments, and by analysis of all that had been done by his fellow-laborers in this field of observation.

Dr. Bennet states, that clinical experience has satisfied him, that morbid menstruation is "nearly always, when strongly marked and *inveterate*, the result of positive disease of some portion of the uterine system, and, generally speaking, of the uterus. That such is the case, must be admitted as probable, when we consider that the function, although presided over by the ovaries, is accomplished by the uterus, which contains an extensive mucous surface."

Dysmenorrhœa is considered as, 1st, *Constitutional;* 2d, *Accidental;* and 3d, *Physical.* Regarding the latter, he is somewhat at issue with Dr. Simpson.

Treatment of course varies according to the cause of the dysmenorrhœa. Subjoined is an abridgment of what Dr. Bennet says on this subject.

Constitutional dysmenorrhœa may be palliated, but can seldom be removed by medical treatment. For young females who suffer from it, the discipline of public schools is nearly always too severe, and often lays the foundation for much future physical and mental misery. That this must be the case, will be easily understood, when we reflect that the domestic treatment of this form of dysmenorrhœa consists principally in *rest* and *warmth.* Females who suffer habitually from dysmenorrhœa, whatever their age, should remain quietly at home, taking care to preserve themselves from atmospheric vicissitudes during the first day or two of menstruation, which is the period during which the pain is mostly felt. A warm hip-bath will often be found useful. If the pains are very decided, it is best to confine the sufferer to bed, and to apply warm linseed poultices to the lower abdominal regions.

In severe dysmenorrhœa, connected with uterine disease, the only *efficacious* treatment is that of the cause of the disease which occasions the dysmenorrhœa. As time is required, however, we are often called upon, even in these cases, to treat the dysmenorrhœa as a symptom. From fifteen to thirty minims of laudanum, mixed with a little warm water, injected into the rectum, will generally as much soothe the uterine pain, as would double the quantity taken by the mouth. Dr. Bennet has also found chloroform of great value in these cases. It may be inhaled or administered by the mouth in doses of from twenty to forty minims, mixed with mucilage, the yolk of an egg, or with camphor, which favors its suspension in water. He has given it by injection, but with less success, as it appears, generally speaking, to irritate the rectal mucous membrane, and is consequently not retained. When it is retained, the sedative effect is nearly always effectually produced. Although chloroform may thus often be resorted to with great benefit in dysmenorrhœa, he does not find that as much reliance can be placed in it as in opiates. Antispasmodics and narcotics, as palliatives, may be administered with benefit in dysmenorrhœa.

Dysmenorrhœa being so frequently caused by inflammatory disease, explains the success which often attends blood-letting, both general and local, and which has induced so many authors to recom-

mend it, although unaware of the pathological state which it relieves. General blood-letting acts by revulsion: whilst local blood-letting directly relieves the congested and embarrassed abdominal circulation. He seldom, if ever, resorts to general bleeding in dysmenorrhœa, because the relief which it gives is obtained at too great a sacrifice of the strength of the patient, and cannot, moreover, be depended upon. A few leeches applied to the groin, or better still, to the neck of the uterus, when possible, if the discharge is scanty or temporarily arrested, is much more likely to mitigate the pain, and with less loss to the economy. Purgatives act in the same way as leeches, by depleting the abdominal circulation.

If dysmenorrhœa resist all general treatment, it is probably the result of local disease. In unmarried females, nothing can warrant manual or surgical investigation and treatment, but months, or even years, of unsuccessful treatment, and the conviction that unless they be resorted to, the case must be abandoned as hopeless. A consultation should be held when the patient is unmarried, to decide whether examination of the uterine organs be necessary.

Menorrhagia is considered with reference to its causes and treatment.

Plugging the os uteri is advised in certain cases, and the method of doing it is explained. It seems to be less painful, less clumsy, and more efficient than plugging the vagina.

In cases in which hæmorrhage persists after the removal of local disease, owing to enlargement of the uterus, to the presence of small unrecognized polypus or uterine tumor in the cavity of the uterus and its neck, or from the mere hæmorrhagic habit, Dr. Bennet "has of late resorted, with encouraging success, to plugging *the os uteri itself*, instead of the vagina." He has, in several instances, brought the cervix uteri into view, and passed inside the os two or three small pieces of cotton, tied to a piece of thread, wedged in firmly, covering the whole cervix with two or three larger pieces, left in close contact with it on the withdrawal of the instrument. In the ordinary operation of plugging the vagina, that canal has to be distended by a large mass of sponge or linen, soaked with clotted blood, which often interferes with the functions of the bladder and rectum, is always a source of great discomfort to the patient, and is not always efficient.

Owing to the natural contractility of the cervical canal, and the pressure of fluids from behind, if the cotton is not well pushed in, it is soon forced out. The plug may be left without renewal for twenty-four or even thirty-six hours; but in the latter case, it is generally expelled spontaneously. A small piece of sponge may be used, and is more likely to remain *in situ*, owing to its expansion; but as it must necessarily be very small, it is more likely to be permeated by the blood. If sponge is used, great care should be taken to extract it; to facilitate which a small piece of thread should always be tied to it, as the os uteri might not be able to expel it alone, owing to great expansion of the sponge which takes place.

In the same class of cases, Dr. Bennet has occasionally found that

a few leeches, applied after menstruation to the cervix uteri, arrested the hæmorrhage.—*London Journal of Medicine.*

Practical Observations and Statistics of Forceps Operations. By Dr. ARNETH. (*Clinical Midwifery.*)

In the 6,608 births, the forceps were resorted to 45 times, or once in 146 births. Boivin employed them once in 214, Lachapelle, during 1803–11, once in 168, and during 1812–20, once in 288. Collins employed the forceps and lever (which last M. Arneth makes no mention of employing) once in 574 cases, and M'Clintock and Hardy resorted to the forceps once in 279, and to the lever once in 378 births—viz., to either forceps or lever in 42 out of 6,702 births, or once in 159½. Boër used the forceps once in 251 births, Klein once in 48, Bartsch once in 72. The two latter practitioners are the directors of the Vienna Lying-in establishments: and it will be observed, that Dr. Arneth's own forceps operations are proportionably far less than theirs, viz., 1 in 146. Adding together the cases recorded by all the above-named observers, we find, that in 168,179 births, the forceps were employed 1,289 times, or once in 130 births.

In 28 of the author's 45 cases, the forceps were applied simply for deficient pains, in 5 for the same cause united with slight pelvic narrowness, 3 times for moderately contracted pelvis, 5 times for eclampsia, once for eclampsia and hæmorrhage, once for a prolapse of thefunis and hand, once for the prolapse ofthe arm with the head,and once for the delivery of the head in a breech-presentation. Of the children, 31 were born living (7 dying within a few days), and 14 dead.

In *deficient pains*, when the necessity of having recourse to the forceps is feared, endeavors are made to excite uterine action by the application of vapor to the parts. The patient is seated comfortably in an arm-chair having an aperture in the seat, under which a vessel containing hot water is placed, her feet being supported by a stool placed within the vessel. The whole is surrounded by a cloth, so as to prevent the escape of the vapor. She remains so seated until the pains augment in severity, or until she feels fatigued; and if, on her return to bed, the pains again diminish, the vapor bath is not unfrequently repeated. Although this bath undoubtedly induces a softened and yielding condition of the parts, Dr. Arneth is disposed to attribute its quickening power upon the pains as much to the assumption of the erect posture, as to the influence of the vapor. When the os uteri is very unyielding, cloths dipped in warm water are kept applied to the external parts, by the hour together, if necessary; and if this has no effect, the patient is placed in a tepid hip-bath, which often proves of the highest utility. If the dilatation of the os has been thus obtained, and yet the pains do not follow, the vapor-bath just alluded to is employed. Dilatation of the tense os uteri by the hand or by instruments is never practised. The *secale cornutum*, as a means of exciting pains, is very rarely employed; and it seems to us that Dr. Arneth by no means appreciates the utility of this valuable drug in the various emergencies under which it is employed here. This may arise from his giving only 5-grain doses every five

minutes, until half a drachm has been taken. If he gave the half drachm altogether, and repeated this dose in half-an-hour, if requisite, we believe his opinion as to the power of the remedy would undergo some change. It is by no means our wish, however, to urge the more frequent employment of the ergot among ourselves; as we feel convinced that it has been, and is, from ignorance and impatience, far too frequently resorted to, both in England and France; and that many examples of infantile asphyxia are due to its injudicious administration. While, therefore, we maintain its great power for good or evil, accordingly as its exhibition is prudently resolved upon or not, we are glad to put prominently forward some of the above-named substitutes in use among the more cautious and more leisurely practitioners of Vienna.

Very different is the result of the application of the forceps for mere deficiency of pain, and for even only a moderate degree of *contraction of the pelvis.* Of the 8 mothers in whom the latter existed, only 2 could be dismissed at the end of the ninth day, like the other women; 1 was attacked by cholera, 1 suffered from urinary fistula, 2 suffered from puerperal fever, but recovered, and 2 died. On the other hand, of the 28 women in whom the forceps was only resorted to on account of defective pain, 23 left the establishment at the end of the ninth day, 3 fell ill, but recovered, and 2 died.

Dr. Arneth never resorts to the "long-forceps," the instrument he employs measuring 15 inches. He especially cautions against the movement of the instrument towards the sides of the pelvis during traction, for although this may sometimes hasten the progress of delivery, it does so at the expense of the soft parts of the mother. He cannot sufficiently express his astonishment at finding, that all the writers whom he has consulted, direct a pendulum or rotatory traction to be employed; and insists that this should be made direct, simultaneously with the pain, when possible, and with uninterrupted and increasing force, so long as the operator's strength allows. In this way much more is done than by occasional violent pulls, and the instrument is held more securely in the operator's power. The author has met with no instance of *separation or loosening of the pelvic symphyses*, stated by Scanzoni as a frequent consequence of the employment of the forceps in a narrow pelvis. One interesting case of this kind following a forceps operation, he relates; but in this the forceps were resorted to (under the same circumstances that most practitioners in this country would give ergot) for a deficiency of pain, notwithstanding complete dilatation. They were applied with great ease, and four or five tractions completed delivery. Soon after the delivery, the patient complained of pain in the left inguinal region, and afterwards along the whole course of the ischiatic nerve. There was no tenderness of the abdomen, except over the symphysis pubis; but excessive pain was complained of on moving the hip-joint, and deep-seated fluctuation was perceptible external to and above the ischiatic tuberosity. The last week prior to her death, she complained of excessive suffering near the left acromion. Delivered on the 26th of October, she died on the 6th of November. Much

yellow purulent exudation was found between the bladder and symphysis, and the periosteum of the horizontal ramus of the pubis was loosened. The fibro-cartilage of the symphysis was in part destroyed, in part infiltrated with the above exudation. The symphysis was so separated that nearly an inch intervened between the ends of the bones, which were also roughened; within the left shoulder and hip-joints, greenish-yellow pus was found. The uterus was lined with a darkish exudation, a few drops of pus being observed where the placenta had been attached. Several small darkish-colored, fissure-like wounds of the cervix uteri, and one in the vagina, were observed.—*Brit. and For. Med. Chir. Rev.*

A New Mode of Treatment for Prolapsus Uteri. By M. DESGRANGES.

M. Desgranges, surgeon to the Lyons Hospital, has laid before the Academy of Medicine of Paris a new mode of remedying the uterine displacement. It consists in pinching up the mucous membrane of the vagina, after reduction, with little forceps, or "serres fines" of Vidal. The forceps produce ulceration, and fall off from the fifth to the tenth day; and M. Desgranges repeats this operation eight or ten times, taking care always to leave as many of the forceps as possible. At the commencement, he introduces as many as nine; later, from six to four; and at last, towards the end, only one of the little instruments. The treatment lasts in general two months and a half, or three months.

It will be seen that this method rests on the fact that the narrowing of the passage may prevent any further descent of the organ, the loss of substance and cicatrization being instrumental in the result.

For assisting the memory of our readers, we shall just transcribe the various analogous operations which have been proposed, as given in a very good article of the *Bulletin de Therapeutique*:—

1. Excision of a few folds of the vaginal orifice, as practised by Dieffenbach, in imitation of Dupuytren's mode of excising some folds of the margins of the anus in prolapsus of the rectum.

2. Excision of a broad longitudinal flap of the mucous membrane of the vagina, either elliptical (Dr. Marshall Hall) or square (Dr. Ireland), and the immediate apposition of the lips of the wound by suture.

3. Cauterization of the mucous membrane, so as to harden the tissues by suppuration, and obtain union between the walls of the vagina and the surrounding organs (Laugier).

4. Excision of a semicircle of the vaginal orifice, and immediate apposition by suture, in acting either on the anterior or posterior circumference.

5. Episioraphy, practised by Fricke, of Hamburg. This consists in paring the inner surfaces of the labia majora, and bringing them together by suture.

6. Complete obliteration of the vagina, proposed by M. Romain Gerardin. This operation has never been practised upon the living subject, and could hardly be thought of before the cessation of the catamenia.—*Lancet.*

PART FOURTH.

AMERICAN MEDICAL RETROSPECT.

COMMUNICATIONS.

Remarks on Amputation of the Lower Jaw. By J. M. CARNOCHAN, M. D., Professor of the Principles and Operations of Surgery in the New-York Medical College; Chief Surgeon to the State Emigrants' Hospital; Ophthalmic Surgeon to the same Institution, etc.

SINCE the publication of my case of amputation of the entire lower jaw, in the January number of the Journal, I have been led to investigations which justify me in presenting it as the first successful operation of the kind reported in the annals of surgery. The operation attributed to Walther of Bonn cannot be admitted as authentic, not because it presented formidable surgical difficulties, although such must always exist, but because no such operation is recorded either by himself or by an eye-witness. I am not alone in this opinion. Velpeau, the great compiler of surgical literature, alludes to it in a brief note [*Nouveaux Elemens de Médecine Opératoire.* Paris. 1839. vol. ii., p. 610], as a mere rumor unsustained by proof. Nelaton [*Elemens de Pathologie Chirurgicale.* Paris. 1849. p. 749] also alludes to the operation as a mere rumor. The most eminent German authority, Dieffenbach, in his Operative Surgery [*Die Operative Chirurgie.* Leipzig. 1848. Zweiter Band. p. 56], under the caption of "Exarticulation of the Entire Lower Jaw," describes a *cadaveric* operative procedure, but makes no allusion to Walther in this relation. Chelius, another eminent German professor [*System of Surgery.* By J. M. CHELIUS. Translated from the German, with notes, by John F. South. Vol. iii. Philadelphia 1847. p. 745], under the caption of "Excision of the Lower Jaw," simply says that "even the *total extirpation of the lower jaw* may be indicated by various kinds of disease," but does not proceed to mention Walther, or any other surgeon, as ever having performed that operation. From this silence it may be inferred that he assumes that the operation was thitherto wholly unknown in the records of surgery. The

latest French authority, M. Vidal (de Cassis), [*Traité de Pathologie Externe de Médecine Operatoire.* Paris. 1851. Vol. iii. p. 509], holds this language in regard to Walther's operation: "success (in an amputation of the entire lower jaw) is attributed to Walther of Bonn;" and further on, "the success spoken of is unique; it has not even an irreproachable authenticity."

There is an operation transcribed from the Italian into the *Gazette Medicale* for Nov., 1844, p. 758, under the head of "Extirpation of the Entire Lower Jaw by sub-cutaneous incision, by M. Signoroni," but it is very far from coming within the category of successful amputations or resections. The record is in many respects vague and unsatisfactory. No details are given of the disease requiring the operation. The operation itself, according to the author, was not an amputation properly so called, but an extraction of the bones, by means of forceps, and the use of the bone scissors. There were no incisions made, except of the buccal mucous membrane, where it is attached to the surfaces of the jaw. Moreover, the extraction was not effected by a single operation, but required a second, after the lapse of eight days. And still farther, the patient was not cured; for according to M. Signoroni, "at the end of nine months he succumbed to a reproduction of the disease."

Professor Syme [*Contributions to the Pathology and Practice of Surgery*, London, 1848, p. 21], in the article on "Excision of the Lower Jaw," states that he disarticulated the jaw; but no details are given of the case or of the operation. Moreover, the patient referred to is stated by him to have died on the following day.

Mr. Perry's case, related in the *Medico chirurgical Transactions*, [London, second series, vol. iii., 1838, p. 290.] like that of M. Signoroni, was an extraction of the bone, piecemeal, at intervals, extending over a period of three weeks.

It would be easy to multiply negative facts of this kind; that is to say, to investigate cases where the operation of amputation of the entire lower jaw was not performed; but those I have adduced and commented upon will suffice for my purpose. In reality, my claim to priority, which I now feel entitled to make, is based upon the positive fact that there exists no record, antecedent to my own, of an operative procedure of amputation of the entire lower jaw, performed with success upon the living body.

In regard to that operation, it was performed upon a principle analogous to that which would govern the amputation, in contiguity, of any other member similarly affected by disease. For example, the removal of the upper extremity at the scapulo-humeral articulation, would be preferred to an operation with section of the bone, where the disease was likely to return, if any portion of the shaft or head of the humerus were allowed to remain. As mentioned in the published report of my case, the body, only, of the bone was in a state of necrosis. To be more definite, the necrosis extended to the anterior edge of the masseter muscle of the left side, and some lines farther, upon the right side. But, although the necrosis did not extend be-

yond the body of the bone, the condition of the rami, on both sides, was such as to demand their removal. If they had not been removed, they would have remained liable to caries or necrosis, in the progression of the disease; the maxillary muscles having become rigidly and permanently retracted, from the irritation of the disease, would have drawn, by the action of the pterygoid muscles, the ramus of each side upon the bag of the pharynx, and so impeded deglutition; while the immovable position of the rami, occasioned by the permanent contraction of the temporal muscles, attached to the coronoid processes, would, upon the deposition of new bone, have led to increased irritation and danger. Lastly, the dilapidated condition of the patient, together with his inability to endure much longer the torture under which he was laboring, from the irritation propagated to the ramification of the third branch of the fifth pair of nerves, lodged in the dental canals, furnished an additional reason for total disarticulation.

In conclusion, I may remark that the patient now, ten months after the operation, is pursuing his vocation as a dairyman, in a state of perfect health. The morbid specimen is deposited in the museum of the New-York Medical College.

Cases in Surgery. Trephining the Cranium and Ligature of the Carotid in Epilepsy. By W. Parker, M. D., Prof. of Surgery in the College of Physicians and Surgeons, New-York. Reported by Stephen Smith, M. D.

Case I.—David Bothwell, aged 32, native of Ireland, of temperate habits, sanguine temperament, by occupation a painter, received a blow on the left parietal bone from a marline spike, while on his passage to this country eight years since. From the immediate effects of the blow he was rendered insensible for several hours, during which he had an epileptic attack. Upon recovering his senses his mouth was drawn to the right side. He had nearly lost the power of speech, and an occasional numbness was experienced in the limbs of the right side. These epileptic seizures were repeated after arriving in this country, but during two or three months which he soon after spent at work on a farm, they were nearly suspended, and he recovered his speech, and considered himself again restored to health. He now continued free from epileptic attacks for upwards of two years, pursuing his occupation and in the enjoyment of fair health, excepting, however, pain in his head, which was quite constant but alternating in severity. This pain was not confined to the seat of the former injury, but was located principally in the forehead. Upon the occurrence of a dangerous illness to his wife, he became much excited, and alarmed at her condition, and after unusual exertion was seized again with an epileptic fit. They now began to recur more and more frequently, finally amounting occasionally to seven in a single day. Any excitement or fatigue, and especially an attempt to read, would provoke an attack. In the course of the subsequent two years or more, all the remedies usually resorted

to in epilepsy, were in turn subjected to trial, but without any benefit whatever from their use.

It was under these circumstances that he first applied to Dr. Parker for treatment during the winter of '47 and '48. His general health was at this time favorable, he suffered from no constant symptoms, excepting the severe circumorbital pain, but his speech was affected and his mind evidently impaired. As medical remedies had been thoroughly tested and found unavailing, and in view of the fact that the disease originated in an injury to the head, at the seat of which there was a manifest depression, it was determined to trephine the cranium at this point, in the confident belief that there must be some local irritation of the brain which such an operation would remove. Dr. Parker proceeded to perform this operation on the 2d day of June, 1848, applying the crown of the trephine over the depressed portion of bone. A stellated fracture was found to have been the result of the blow received four years before, and a small spicula of bone from the inner table penetrated the dura mater. No fluids of any kind escaped, the dura mater was healthy and the wound was closed in the usual manner. On the 5th day erysipelas attacked the wound and spread over the entire scalp, threatening at one time to prove fatal. He, however, recovered, and upon the closure of the wound remained free from his former attacks upwards of three months. At the end of this period, upon the occasion of a slight exciting cause, he was again seized with fits, and continued to be harassed by them until the autumn of the same year, when, as a last resort, Dr. Parker proposed ligating the carotid of the affected side. He eagerly consented, and early in November this operation was also performed. The ligature came away in due time, and the wound healed readily; again he was relieved for a time, but not permanently. The attacks returned with increased force and frequency, he became irritable, and occasionally appeared maniacal. He was placed upon a vegetable diet, directed to take saline cathartics frequently, bathe the head often in cold water, resort to venesection occasionally, and avoid fatigue and all exciting causes.

He has followed this regimen very strictly for a year or more, with very decided advantage; the epileptic seizures now recur at much more distant intervals, and a threatened attack is often warded off by a resort to blood-letting, and the application of cold to the head. While at work at his trade several months since he fell from the ladder, causing a considerable flesh wound upon the abdomen; this suppurated freely, and was some weeks in healing; during this period he was entirely free from epilepsy. This accident, like most of the operations for the relief of this disease, such as issues, cauterizations, and except where a real cause of irritation is removed, was beneficial only while it served as a diversion from the nervous centres.

Case II.—The following case of *Ligature of the Carotid Artery in Epilepsy*, by Dr. C. Morrogh of New-Brunswick, New Jersey, alluded to in an article on the "*Surg. Treat. of Epilepsy*" in the

last number of this Journal, has recently been communicated to the writer, and is deemed worthy of insertion in this connection.

William Williamson, of Six Mile Run, aged 24 years, has been subject to epileptic seizures for about 8 or 9 years. Patient is well formed, about six feet in height, of robust appearance, regular habits, and good intellect; not married; parents and family all healthy.

For the period above stated, patient has suffered at irregular intervals, from a dull, throbbing pain over the surface of the cranium, attended with congestion of the conjunctiva and throbbing of the temporal arteries. The headache commences at all hours, without reference to time; it lasts from fifteen minutes to as many hours, increasing in severity till it becomes almost insupportable, when the patient loses his consciousness, and the usual phenomena of epilepsy supervene. He has never received any serious injury on the head or elsewhere; has no syphilitic taint; tongue is clean and natural, digestion good; no symptoms of entozoa; no tumor or morbid growth to be discovered; no fever; pulse 72, and otherwise natural. There is no aura epileptica, though patient can generally foretell the approach of a fit, by the intensity of the headache. Since the commencement of his disease, the paroxysms have continued to increase in frequency and severity.

At the present time he experiences several attacks every day, and he describes his sufferings from headache as extreme. Of the ætiology of my patient's disease I am profoundly ignorant.

Treatment.—Heretofore patient has been subjected to almost every conceivable system of treatment; he has consulted innumerable medical men both in the surrounding country and in the large cities. According to his own relation, he has been freely bled, both generally and locally. Gentle and free purging have been produced by all kinds of cathartics. He has at different times been placed under the influence of mercury and its chlorides, various forms of counter-irritants, different salts of silver, iron, copper, lead, zinc, arsenic, and iodine, antispasmodics and stimulants, digitalis, hyosciamus, strychnine, turpentine, and drugs without number, and has resorted to Indian doctors, homœopathy, hydropathy and magic.

Seeing nothing more to do for my patient, I proposed to him the expedient of ligating one of the common carotids. I told him how uncertain the remedy was, and rather exaggerated its danger, but he grasped at the proposition with avidity, and immediately took lodgings in the vicinity of my residence, so that I might the better attend to him.

The operation was performed Feb. 23d, 1849, in the usual manner, in presence of Drs. Woodhull and Skillman of this city and Dr. Gayle of Sommerville. The right carotid artery was secured above the upper margin of the omohyoideus. The distress on the same side of the head was at once relieved.

March 9th, fifteen days after operation.—Ligature came away to-day. Wound doing well; patient feels much better; right side of head is free from any pain; and right conjunctiva is clear and free

from distended blood-vessels; there has remained however on left side some pain and congestion of conjunctiva; the arteries also on this side continue to beat stronger than natural, though not so much as before the operation. He has had two slight fits.

March 15th.—Wound is entirely healed. Patient much better. He leaves for home to-day.

Oct. 23d, seven months after operation.—Patient has had no attack since the separation of ligature till the other day, when he had a mild one. The distress on left side of head increases.

Dec. 25th, ten months after operation.—Patient has experienced one more paroxysm of epilepsy, which has been rather severe. Distress in head increases.

Feb., 1852, *three years after operation.*—Since the last date, patient has grown worse; the distress has gradually returned to right side. He is now as bad as ever; his memory fails, and the inroads of the disease on his mental faculties become more and more apparent. I have no remarks to offer on this case, but what I think will suggest themselves to your mind.

The evident hyperæmia of the head pointed to this mode of treatment as one which might afford relief.

The local disturbance in the circulation is caused, I take for granted, by a diminished flow through the capillaries, and not by any increased vis a tergo; but as I could not divine what was the cause of the capillary obstruction, or how far it was connected with the other morbid symptoms, I confess I was more influenced by hope than confidence in this remedy.

Another consideration tended to dampen my ardor, viz., by cutting off the supply of blood through the carotid, it could only affect the investing membranes of the oncephalon, the anastomosing branches at the base of the brain being quite sufficient to supply any demand which could occur in the cerebral mass itself.

PRACTICAL MEDICINE.

Microscopic Observations respecting Arterial and Capillary Circulation. By J. H Wythes, M. D., of Paoli, Pennsylvania.

It will be readily acknowledged by most physiologists, that the movement of the blood in the capillaries, is to a great extent independent of the action of the heart, since it may continue after the cessation of the heart's action is affected by causes originating in the capillaries themselves, and is present in the vascular area before the development of the heart. The capillary vessels, however, exhibit no obvious movement when examined by the microscope; the blood passing through them in a continuous stream. Now as the only method in which the capillaries could influence the current of blood, is by a peristaltic or pulsatory motion, and as such motion is not observable in them, it seems probable either that their influence has been overrated, or that the cause and manner of their operation is yet undiscovered.

The arteries, on the contrary, are known to possess both elastici-

ty and contractility. The former of these properties is generally considered to be of a purely physical character, serving to convert the intermittent impulses the blood receives from the heart into a continuous current. The contractility of the middle arterial coat is thought to be a vital property, similar to muscular contractility. A modification of this force is termed tonicity, an example of which is seen in the arrest of hæmorrhage by the contraction ensuing on the division of an artery.

The pulsations of the arteries, however, have been regarded as caused by the alternate contraction and dilatation of the heart, and to be equalizing and retarding, rather than propulsive, in their influence on the vital current. Yet physiologists have been inclined to attribute some propulsive influence, supplementary to the heart's action, to the arterial coats. Dr. Carpenter remarks, "If the fibrous coat of the arteries is in some degree disposed to the alternate contraction and relaxation which are so remarkable in the heart, they *may* exert a force which shall be supplementary to that of the heart's impulse, relaxing to receive the blood from it, and contracting upon their contents, with a power superior to that by which they were distended. It is difficult to say whether or not this be the case, though there would certainly appear some evidence in favor of the supposition. The loss of the heart's power over the currents of blood, in proportion to their degree of subdivision, occasioned by the increased friction to which they will be subjected, would seem to require some compensating power, in order that the perfect equality of pressure may be obtained which has been spoken of as existing in all parts of the arterial system. In no other way than this can the fibrous coat of the arteries be regarded as having any propulsive power over their contents, except by a peristaltic or vermicular movement, resembling that which takes place in the alimentary canal; and of such there is no evidence whatever."

It is evident that Dr. Carpenter regards the contraction of an artery upon its contents, to be owing to the stimulus afforded by its distention with blood, which being expended, the vessel is ready to dilate to receive a new supply. The microscopic observation to which we are about to refer, leads the writer of this article to entertain a different view. It seems to be demonstrated by this that the pulsatory movement is a property residing in the arterial coats themselves, independent alike of the heart's action and the stimulus of the blood.

Having caught a mouse in a trap (it was quite cold and stiff when taken out), I was desirous of making some preparations of epithelium, &c. On taking out the kidneys it occurred to me to place a thin slice upon a slide for microscopic examination. The slice was made quite through the middle of the kidney, and was about one-thirtieth of an inch in thickness, just thick enough to be translucent. On placing it under the microscope, one of the largest vessels was observed in active motion, alternately contracting and dilating with evident vermicular contortions, communicating motion to the blood

corpuscles in the capillaries for a considerable distance. The movement seemed limited to the artery, and was not communicated to the coats of the capillaries, although their contents had an oscillatory motion corresponding to the contents of the artery. The phenomenon was seen for about three hours, when the observation was suspended. The motion had then considerably diminished both in extent and energy.

I was at first inclined to attribute this activity to evaporation of the watery particles from the slide, but this is insufficient to account for the regular pulsatory character of the movement. It is therefore due, in all probability, to the vital pulsations of the coats of the artery. I have not had an opportunity since that time to repeat the experiment.

The only parallel case with which I am acquainted, is recorded in Hassall's Microscopic Anatomy, as follows:—"On one occasion, in examining the tongue of a frog, a portion of it broke away from the remainder; this I placed between two plates of glass, and submitted to examination, when, extraordinary to say, it was perceived that the circulation was still vigorously maintained in the majority of the vessels. Anxious to know how long this circulation would be continued, but fully expecting to see it cease every moment, myself and a friend, John Coppin, Esq., of Lincoln's Inn, watched it for upwards of an hour, at the end of which time the blood still flowed onwards in many of the vessels, with scarcely abated vigor, though in others, often the larger ones, the motion had altogether ceased. The mutilated portion of the tongue was then placed in water, in which it remained during the whole of the night; the next morning it was again examined, when it was found that a tolerably active circulation still existed in several of the smaller vessels. After this observation, the further examination of the fragment was abandoned."

These observations show:—1. That the pulsation of the arteries is a property residing in the coats of those vessels, which is independent of the heart's action, though supplementary to it; and also independent of the stimulus arising from distention with blood.

2. That a peculiar propulsive force, in all probability, resides in the capillary vessels, of whose nature we are at present uninformed.

3. That one of the chief causes of the capillary circulation, is probably the pulsation of the arterial branches from which they spring.

Punctured Wound of the Liver followed by Recovery. By Frederick G. Leroy, M. D., Resident Surgeon of the New-York Hospital.

Wm. Craddock, æt. 27, New-York, seaman, admitted into the New-York Hospital, July 4th, 1851 (Dr. Post in attendance), with a penetrating wound of the abdomen, caused by the premature discharge of a horse pistol, from which he was endeavoring to withdraw the ramrod. The rod passed between his hands, and struck the ab-

domen a little to the right of the median line, about an inch below the common cartilage of the false ribs on that side. Upon introducing the finger, and tracing the course of the wound, the liver could be distinctly felt, and on passing its extremity over the surface of the organ, a laceration of it was detected that corresponded with the external opening. From the nature of the injury, its precise depth could not be ascertained. Patient had on at the time of the accident, a common colored shirt, with a red one beneath it; the fragment of red flannel was removed by the physician who attended him previous to his admission into the Hospital. The portions of the colored garment were supposed to have been carried in with the rod. Has vomited several times since the accident; at present complains of no pain, but has some difficulty in respiration. There was a slight venous hæmorrhage from the wounds. Pulse natural.

Treatment.—Edges approximated by means of a suture. Cold water dressing. ℞. Tr. opii. M. xxx. P. M. ℞. Pil. opii. gr. 1. q. 2 h.

July 5th.—Patient passed a comfortable night, after having taken two of the above pills. Bowels being confined, ordered an enema containing ol. terebinth ℥ s; wound covered with lint saturated in m. g. a., and emplas. vesicans over this as a prophylactic. Strict diet.

July 7th.—There is slight tympanitis; the bowels remaining constipated, was directed to ℞ Cal. grs. ii. q. 2 h. until they were moved. Camph. cataplas. to abdomen. The calomel vomiting him after the second powder, it was discontinued: ℞. Haust. effervesc.

July 12th.—General condition favorable, no symptom of an urgent character having presented since the last note. At present there is no febrile action, has a natural stool, &c. The slough is separating from the edges of the wound, which is closing up with healthy granulations. To-day, removed several pieces of cotton, which upon examination proved to be the missing portions of the colored shirt.

July 20th.—Has had several paroxysms of pain over the region of the liver, and in the right shoulder, which he states to have been of a tearing character, and most intense in the evening. Respiration labored, and 27 per min. Pulse alternating between 72 and 80, without any undue excitement. ℞. Opiates. Camph. poultice to abdomen, and emplas. vesicans., over the seat of pain; under the influence of which remedies, all the unpleasant symptoms gradually subsided.

July 23d.—Several chills have occurred in the last two days; general condition very unfavorable, countenance haggard, hot surface, labored inspiration, cough, with pain in the side. Pulse 92, frequent and hard, slight dulness on percussion. ℞. Tart. ant. et potass. grs. ¼ q 2 h. Emplas. vesicans. to side.

July 24th—After taking one dose of the antimonial solution, patient became so much prostrated, as to require stimulants, and upon reaction being in a great measure established, ℞. Pul. ipecac. gr. ss. m. g. a ℥ ss. as a substitute for the above solution. Still com-

plains of pain in the side, and difficulty on inspiration. Auscultation reveals an indistinct crepitas. ℞ Emplas. vesicans. over the posterior surface of the lung.

July 30th.—All the thoracic symptoms have subsided, with the exception of a slight uneasiness in the right side. Chills continue; has had as many as four in the twenty-four hours. After some of these attacks patient is very much prostrated, and at times quite flighty. For these the sulphate of quinine has been freely given, commencing with grs. x., and gradually increasing up to the present time, when he takes grs. xxv. in the day. The wound has entirely healed.

Aug. 4th.—Has had no chills for four days past. Quinine has been continued to the present date, when it is directed to be gradually diminished daily. The whole surface of the trunk is covered with suppurating boils, that occasion considerable constitutional irritation; upon their subsiding, patient's whole system seemed to undergo a marked change for the better, and he commenced gaining in flesh.

Aug. 16th.—Since last date an abscess has formed, and pointed in the original wound, opened spontaneously and gave exit to a greenish discharge, pus apparently tinged with bile; upon its ceasing, the wound again closed, and he was discharged cured.

The present case possesses a peculiar interest, from the serious nature of the wound, and the entire absence of any report of cases strictly identical with it in the different Journals, and surgical authorities that have been consulted. One of its most prominent features was the greenish discharge from the abscess, some of which was collected and placed in the hands of a chemist for analysis; but no satisfactory return could be elicited from him, although particularly requested to give it a careful examination. That this discoloration was effected by bile, is a fair conclusion, and one, I think, the history of the case justifies. What office nature performed in its happy termination, or how much should be attributed to the treatment employed, is a question for conjecture. But, that opium exerted a beneficial influence in this, is indicated by the pulse; and its efficacy in wounds of a similar nature will be allowed by all surgeons who have given it a trial. Cases of rupture of the liver occur, though they are rare, and are generally the result of fracture of the ribs, or some heavy weight passing over the body. But these lesions are not ascertained until revealed by an autopsy. A case is reported in the Medico-Chirurgical Review, New Series, vol xxiv., p. 296, in which a cavalry officer was thrown from a horse, and the animal trod upon his chest with his hind feet. He survived the accident eight years, experiencing constant pleuritic attacks. Before his decease he fell under the observation of the physician who had attended him after the accident, who feeling an interest in the case, made an examination, and found a rupture of the right lobe of the liver, throughout its whole length and substance, from its anterior to its posterior border. The cicatrix was large, broad, and of a cartilaginous character; occupying the fissure beneath this, were biliary

concretions. Two cases of wounds of the liver are recorded in the case books of this hospital, though no symptom presented, by which they were recognized as such previous to death. One was that of a boatman, admitted with a penetrating wound of the abdomen, inflicted with a butcher's knife. Patient lingered twenty-two hours. Autopsy disclosed an incised wound of the left lobe of the liver, three inches in length and one and a quarter in depth. The second was a cartman, who had received a gun-shot wound of the abdomen, midway between the umbilicus and ensiform cartilage—survived the accident twenty-four hours. On making an examination, the left lobe was found to have been lacerated by the shot, and the coats of the stomach perforated.—*Med. Times.*

Results of Treatment in Thirteen Cases of Pseudarthrosis.

In the *N. Y. Med. Times* for October Dr. Watson has reported thirteen cases of pseudarthrosis, which have been treated in the New-York Hospital since 1839. The following is his summary of them: Of these cases, some were under the care of my colleagues, and some, either wholly or part of the time, under my own charge. Among my own cases, I was in one instance obliged to resort to amputation. I have in no instance, as yet, applied either the seton or the wire.

Of the whole number of cases of which I have any memoranda, one was in the humerus, two in the forearm, two in the os femoris, and eight in the bones of the leg; seven underwent operations, and six got well by other means. Of the seven that were subjected to operations, one underwent amputation and recovered; three had setons passed through the ends, all of which were also reported to have been cured; three submitted to excision, drilling, and the wire ligature; of these latter, one died, one recovered with the wire permanently imbedded in the bone, from which it could not be extracted, and the third, now six months after the operation, is still uncured. In the fatal case, as well as in the case subjected to amputation, the false joint was seated below the knee. In those that recovered after wiring, it was in the forearm; and in the cases treated by the seton, the humerus in one, the femur in another, and the tibia in another, was the seat of accident. In the cases that got well independent of operation, the false joint was, with the exception of one, situated in the bones of the leg.

MISCELLANEA.

State Medical Society.—This Society held its annual session at the capitol in Albany on the 3d, 4th, and 5th Feb. The following officers were elected for the ensuing year, viz. President, Alonzo Clark, M D., of New-York; Vice-Pres., J. S. Sprague, M. D, Otse-

go Co.; Treasurer, PETER VAN OLINDA, M. D., Albany; Secretary, THOMAS HUN, M. D., Albany.

Censors for Southern District.—Chas. S. J. Goodrich, M. D., Brooklyn, John C. Cheesman, M. D., New-York, Wm. Rockwell, M. D. do.

Delegates to American Medical Association.—Drs. A. H. Stevens, C. S. J. Goodrich, Jas. R. Wood, Alonzo Clark, Willard Parker.

Drs. Geo. W. Norris of Philadelphia and Saml. S. Purple of New-York were elected honorary members.

The next semi-annual meeting will be held in New-York on the last Tuesday of June next, when it is hoped a large representation will be in attendance.

New-York Academy of Medicine.—The following resolutions have been officially sent us for publication. They were adopted at the adjourned meeting of the Academy, April 21st, 1852.

"Whereas, The duty of rendering medical and surgical services to the poor and destitute, *without fee or reward*, is one of universal and perpetual obligation upon every member of our liberal profession. Therefore,

"*Resolved*, That no fellow of this Academy shall be countenanced in making exclusive pretensions to benevolence by public advertisements, or private cards, circulars, or any other device 'publicly offering advice, medicines or operations to the poor gratis' either in his individual capacity, or in virtue of any office or position he may hold, in any *clinique*, *school*, *college*, or other public institution.

"*Resolved*, That these resolutions be published in the Medical Journals of the city."

New-Yorker Medicinische Monatsschrift.—This is the title of a new medical journal in the German language, which has recently made its appearance in our city. It is edited by Drs. J. Herzka, E. Krackowizer and W. Roth, and published monthly at four dollars per annum. We welcome it to our exchange list and wish for it a long and successful career—a career commensurate with the zeal and ability with which it is edited.

Canada Medical Journal.—This journal has sprung up since the discontinuance of the British American Medical and Physical Journal. It is edited by Drs. R. L. Macdonnell and A. H. David, and

published monthly at Montreal. We have ordered it placed upon our exchange list and shall welcome its visits with pleasure.

East Tennessee Record of Medicine and Surgery.—This quarterly journal is edited by Frank A. Ramsey, M. D., and is published under the auspices of the East Tennessee Medical Society, at Knoxville. We commend it to the confidence and support of the profession.

British American Medical and Physical Journal.—It is with feelings of much regret that we have to announce the discontinuance of this valuable Journal. We have received a circular from its editor, Dr. Hall, containing an exhibit of its financial condition which shows conclusively that its delinquent subscribers must consider themselves the principal cause of this event. Non-paying subscribers are poisonous to medical journals, prompt remittance of their indebtedness is the only prophylactic.

OBITUARY.

Death of Dr. James H. Rogers—At San Francisco on the 30th January last, aged 50 years. He was formerly of this city and at the time of his death health officer of the port of San Francisco.

Death of Prof. W. R. Grant—In Philadelphia in March last. He was professor of anatomy in the Pennsylvania Medical College, a man of high professional and moral worth, and much esteemed by all who knew him.

Death of Dr. W. P. Hort—Recently in New Orleans, aged 53 years. He was an able writer and contributed largely to medical literature. He was a member of the Board of Health of that city, and from 1837 to the time of his decease he held the appointment of Assayer to the Branch Mint in New Orleans.

Death of Dr. A. J. Rand.—At Seamen's Retreat, Staten Island on the 9th of March, after a brief illness, A. Judson Rand, M. D., one of the physicians to the hospital, in the 34th year of his age. Dr. Rand was a graduate of the College of Physicians and Surgeons of the class of '47–'48. Possessing a rare combination of the noblest qualities of mind and heart—the one stored with varied learning, the fruit of long and patient study—the other, a well-spring of generous emotions, impelling him ever to sacrifices of benevolence—he was pre-eminently fitted for the station he filled.

INDEX TO VOL. VIII.

NEW SERIES.

A

Academy of Medicine, resolutions of 427
Adulterated medicines . . . 361
Air, syncope from in facial vein 356
Albers on malignant growths . 263
Albuminous urine 399
American Medical Association 262, 289
Amputation of lower jaw . 9, 416
" in epilepsy . . 224
Aneurism, list of cases treated by compression 276
Aneurism, Bellingham on . . 271
" compression in . . 271
" of aorta, treatment of . 404
Aorta, treatment of aneurism of . 404
Arneth's observations on the forceps 413
Arteries, ligature of in epilepsy 226, 418
Ascites, iodine injections in . 406
Atmospheric temperature of Panama 247
Ayres on tetanus 74

B

Beck's materia medica . . 133
Bennet on menstruation . . 410
Bennett's case of ovariotomy . 288
Bennett on treatment of typhoid fever 357
Bernard and Huette's operative surgery 132
Bellingham on treatment of aneurism 404
Blackman on exsection of lower jaw 280
Bladder, rupture of . . . 352
Brain, concussion of . . . 348
Bryan on diseases of the ear . 398
Bryan's cases of tumors . . 205

C

Cameron, Dr., obituary notice of 144
Cases in surgery . . 186, 418
Carotid, ligature of in epilepsy 227, 418
Cancer, hints on 139
Carnochan on amputation of entire lower jaw . . . 9, 416
Carpenter's elements of physiology 136
Cauterization in epilepsy . . 220
Capillary circulation, . . 421
Climate fever, remarks on . 366–377
" " treatment of. 369–378
" " arsenic in . . 371
" " emetics in . . 372
" " mercurials in . 373
Congestive fever, remarks on . 374
" " treatment of . 375
Collodion in erysipelas . . 403
Costes on iodine injections . . 406
Colton, F. F., obituary notice of 290
Compression in aneurism, remarks on 271
Communicability of cholera . 343
Concussion of brain, case of . 348
Cholera asphyxia, cases of . . 344
Cragie's elements of anatomy . 135

D

Dalton's case of poisoning with oil of tansy 288
Dalrymple on fracture of pelvis . 352
Desgranges on prolapsus uteri . 415

Dentists, education of . . 81, 381
De Kay, Dr., obituary notice of . 144
Dickson's essays, notice of . . 397
Dislocations, rare forms of . 186–198
Dislocation of the humerus 186–187
" " radius . 188–189
" " femur 189, 259, 270
" " vertebræ 190, 203
Doane, S. A., obituary notice of . 290
Dowler on physiology of subjectivity 64

E

Education of dentists . 81, 381
Erysipelas, treatment of . . 403
Epilepsy, surgical treatment of . 220
" tracheotomy in . . 224
" ligature of arteries in . 226
" trephining in . 230, 418

F

Femur, dislocation of . 259, 270
" rare dislocation of . . 189
Fenner's medical reports . . 134
Fever, typhus, observations on . 299
" typhoid, treatment of . 357
" puerperal, cases of . . 328
" climate, remarks on . . 366
Fischer on dislocation of femur 270
Forcep operations, statistics of . 413
Fracture of pelvis . . . 352
Fractures of the skull . . 29

G

Gay on treatment of diseased joints 266
Grant, Prof., obituary notice of . 428
Graham's Chemistry, notice of . 398
Gross on diseases of urinary organs 106
Gregory on vaccination . . 401
Gunn's case of syncope . . 356
Guersant on erysipelas . . 403

H

Halsey on lithotomy . . . 72
Hard, obituary notice of . . 141
Hamilton on extirpation of half of lower jaw, ... 289
Hort, Dr., obituary notice of . 428
Howard on Quinidine . . 405
Humerus, rare dislocations of . 187
Hydrarthrosis, iodine injections in 406

I

Iodine injections in ascites . . 406
Incision of joints, remarks on . 269

J

Jaw, lower, amputation of . 9, 289
" " priority in exsections of 280
Joints, diseased, treatment of . 266
" resection of . . . 268
" ulceration of . . . 267
Jones on albuminous urine . . 399

L

Larynx, polypus of . . . 15
" " remarks on . 18
Laryngotomy in polypus of larynx 27
Lente on fractures of the skull . 29
Lee on treatment of ovarian disease 408
Lidell on medical history of Panama 242
" " diseases of Panama . 365
Lithotomy, case of . . . 72
" remarks on . . . 119
" statistics of . . . 122
Litten's case of dislocated femur . 259
Lithotripsy, remarks on . . 114
" use of chloroform in . 117
Liver, punctured wound of . . 423

M

Maclice's surgical anatomy . . 131
Malignant growths, characteristics of 263
Malgaigne's operative surgery . 133
Manley, Dr., obituary notice of . 143
Marsh miasmata, remarks on . 250
Medical reports, notice of . . 134
" extracts, notice of . . 141
" improvements, Williams' notice of . . . 153
" societies, first organized . 156
" periodicals, notice of . 157
" topography of Panama . 242
" transactions, notice of . 262
Medicines, adulterated, remarks on 361
Menstruation, Bennet on . . 410
Medical society of N. Y. . . 427
Microscopic observations . . 421
Morrow on ligature of carotid . 419

N

Nogueira on vaccine fluid in small-pox 137

O

Obituary notice of Prof. Hard .
" " Dr. J. K. Rogers . 1
" " Prof. Pattison . 143
" " Dr. J. R. Manley . 143
" " " De Kay . . 144
" " " Cameron . 144
" " " J. Vanderpoel 144
" " " S. R. Smith . 290
" " " S. A. Doane . 290
" " " F. F. Colton . 290
" " " J. H. Rogers, . 428
" " Prof. W. R. Grant 428
" " Dr. W. P. Hort . 428
" " " A. J. Rand . 428
Operative surgery, notice of 132, 260
Opium in puerperal fever . . 334
Os uteri, plugging of . . . 412
Ovariotomy, case of . . 212, 288
Ovarian disease, Lee on . . 408

P

Panama, medical topography of . 242
" diseases of . . . 365
Parker's cases in surgery 15, 186, 418
Pattison, Prof., obituary notice of 143
Perkins on puerperal fever . . 328
Phlebitis after lithotomy . . 121
Physiology of subjectivity . . 64
Polypus of the larynx, cases of . . . 15–17, 19, 25
Prostate, hypertrophy of . . 124
Pseudarthrosis, treatment of . 426
Puerperal fever, cases of . . 330
Purple on concussion of the brain 348

Q

Quinidine, remarks on . . 405

R

Radius, rare dislocations of . 188–189
Rand, Dr., obituary notice of . 428
Reese's analysis of physiology . 398
Ricord on syphilis, notice of . 130
Rogers, Dr., obituary notice of . 428
Rupture of bladder, case of . . 352

S

Scarifications in epilepsy . . 222
Setons in epilepsy . . . 220
Smith's operative surgery . . 260
Smith on treatment of epilepsy . 220
Dr. S. R., obituary notice of 290
...ll-pox, novel remedy for . 137
...ll, fractures of . . . 29
" statistics of fractures of . 31
...ounding, remarks on . . . 110
Statistics of fractures of the skull 29
Sterling on cholera asphyxia . 343
Stone on cancerous affections . 139
" fracture of pelvis . . 352
Stone, symptoms of . . . 109
" sounding for . . . 112
Stricture, remarks on . . . 126
" external division of . 128
Swett on diseases of chest . . 261
Syphilis, illustrations of . . 130
Syncope from air in facial vein . 356
Symphyses pubis, separation of . 414

T

Tansy, poisoning by . . . 288
Temperature, atmospheric of Panama 247
Tetanus, case of 74
Topography, medical of Panama 242
Tracheotomy in epilepsy . . 224
Transactions, American medical . 262
Trenor on dental education . . 81
Trephining in epilepsy . . 230, 418
Tumors, remarks on . . . 205
Typhus fever, cases of, 301, 307, 312, 319, 322
Typhoid fever, treatment of . 357

U

Upham on typhus fever . . 299
Urinary organs, diseases of . . 106
" calculi, frequency of . 107
Urine, incontinence of . . . 73
Uterus, prolapsus of . . . 415

V

Vaccination, Gregory on . . 401
Vaccine virus, an internal remedy in small-pox 137
Vanderpoel, Dr., obituary notice of 144
Van Buren's case of ovariotomy . 212
Velpeau's midwifery, notice of . 397
Vertebræ, cases of dislocation of 190, 203

W

Watson on pseudarthrosis . . 426
Westcott on education of dentists 381
Willard on adulterated medicines 361
Williams on medical improvements 153
Withes on capillary circulation . 421
Wound of liver 423

ERRATA.

Page 159, 6th line from top, for "Brichat's" read "Bichat's."
" 168, 2d " " bottom, for "Corte" read "Crete."
" 169, 4th " " top, for "Ventoras" read "Ventores."
" " 5th " " " " "Assimboins" read "Assinneboins."
" 171, 15th " " " " "putrefaction" read "putrefactive."
" 173, 18th " " " " "homœpathists" read "homœopathists."
" 176, 4th " " bottom, for "ostro-sarcoma" read "osteo-sarcoma."
" 181, 13th " " top for "Kentucky" read "Keene."
" 231, 3d " " bottom, for "Abernethy" read "Abernethe."